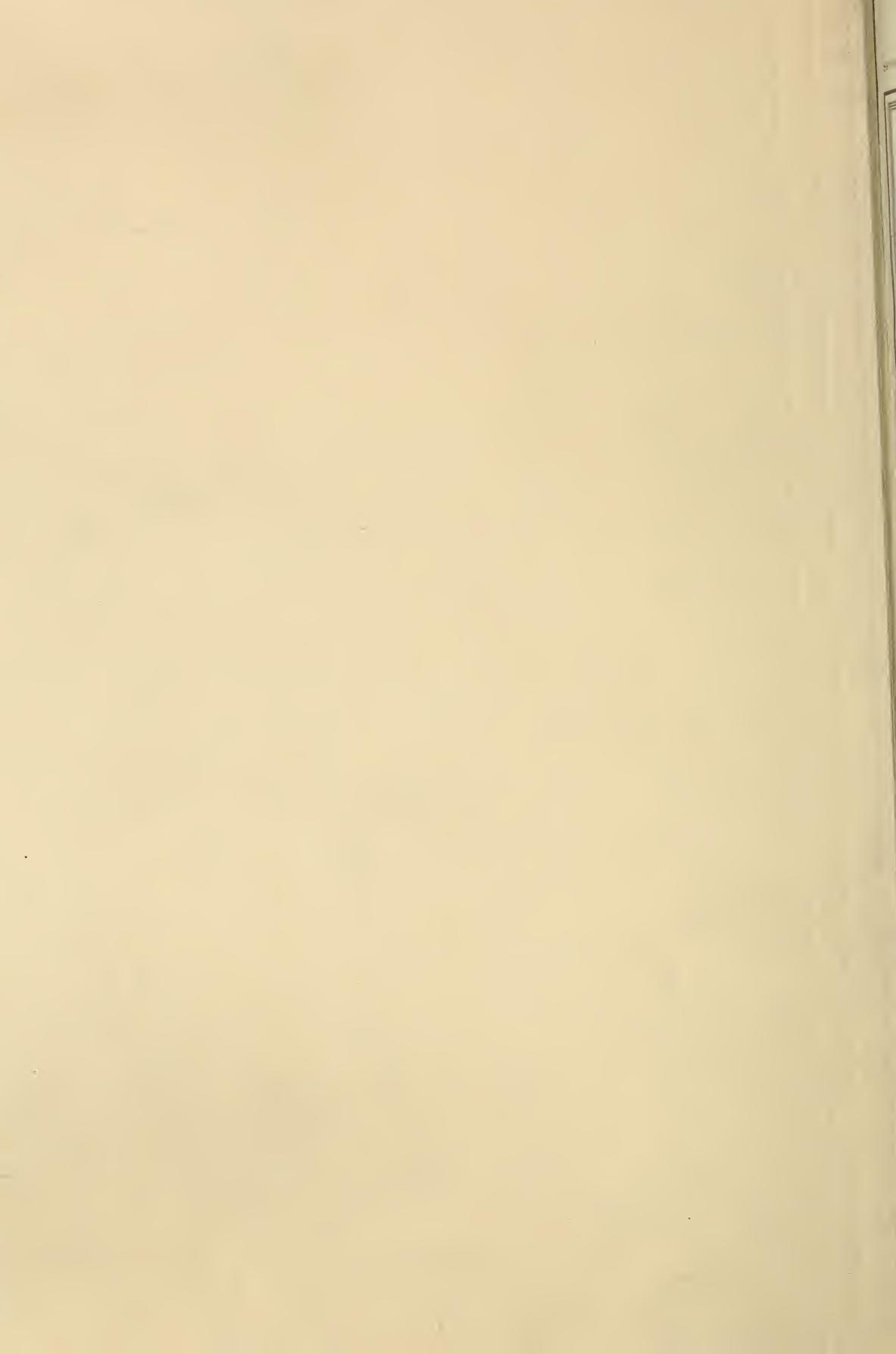
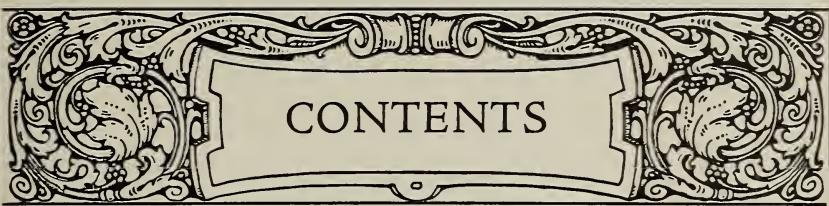


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SUBSCRIPTION RATES.—One year, \$1.00; two years, \$1.50; three years, \$2.00; five years, \$3.00. Canadian subscription, 30 cents additional per year, and foreign subscription, 60 cents additional. **DISCONTINUANCES.**—On and after March 1, 1917, all subscriptions, not paid in advance, or specifically ordered by the subscriber to be continued, will be stopped on expiration. No subscriber will be run into debt by us for this journal.

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(Entered as second-class mail matter at the Postoffice at Medina, Ohio.)

THE A. I. ROOT COMPANY, Publishers, Medina, Ohio

Editorial Staff

E. R. ROOT	A. I. ROOT	H. H. ROOT	J. T. CALVERT
Editor	Editor Home Dept.	Managing Editor	Business Manager

"When we receive your Honey
Return mail brings your Money."

The Fred W. Muth Co.

Get Service Like this Man

Lake City, Mich., May 5, 1917.

Friend Muth:—Your letter with check for \$146.20 for wax has been received. Thanks. I do believe you beat them all when it comes to quick returns for goods shipped you. I may have some more wax to sell after we get our cappings melted.

Yours truly,
(Signed) Elmer Hutchinson.

We Want Immediately Extracted Honey

We buy all grades of Extracted Honey. Large or small lots. Send sample and price. If price is right we will buy. Parties who have Fancy and No. 1 Comb Honey, write us at once. We will buy from 40 to 50 carloads this season.

Beeswax

Send us your beeswax. We pay highest market prices, and send you our check the same day shipment is received.

Old Comb

Make some spare money from the wax rendered from your old comb. We will render it, charging only 5 cents per pound for rendering, and pay you best market prices for the wax rendered.

Shipping-cases for Comb Honey

We are prepared to ship you the same day order is received any number of shipping-cases. Several carloads are here now, ready for buyers. Send your order in now before our supply is exhausted. We sell Lewis Beeware.

Remember

We remit the same day your shipment arrives. Read the letter above and be convinced that this is the house to send your shipments to. Try us.

The Fred W. Muth Co.

"The House the Bees Built"

204 Walnut St., Cincinnati, Ohio

HONEY MARKETS

The honey market is as full of complications as possible. The general but uncertain high prices of all foods, governmental intervention by Food Commissioner Hoover in the sugar market, unprecedented buying of honey for export, speculative buying of honey, and the still uncertain total amount of this season's crop, are all factors in present market prices.

Very recent inquiry by "Gleanings" over the Northern and Western states (not the Pacific Slope nor South), of fair and unprejudiced sources, would indicate that the total crop is materially short. There are localities, notably in New England and Wisconsin, where the crop is reported as above normal. There are "spots" over the whole North and West where the honey-yield has been excellent, but these are the exception. New York, Michigan, Ohio, Indiana, Colorado, and Idaho report a crop of only about 50 to 60 per cent of normal. Illinois has a very poor crop and Iowa perhaps even poorer. California's crop is short and the Texas crop almost a failure.

In this same general section of the country, honey-buyers have been offering from 10 to 13 and 14 cents per pound for white extracted, and some producers are holding for even higher prices. Comb honey is not attracting the market attention it formerly did, but the price offered is high—for fancy 17 to 20 cents generally. It should be interesting to comb-honey producers to know that a number of beekeepers in New England report selling comb honey locally to consumers at from 30 to 40 cents a pound.

Buyers are more numerous than ever, with Italy an active buyer, altho Great Britain and France are not actively in the market for the time being, waiting until prices shall be a little easier, so we are told on good authority.

Should the producer sell now or wait till later? "Gleanings" is not prepared to advise. If honey sells on the docks in New York at 14 and 15 cents, and even 16, what should the beeman get? Freights are high and congested. Cartage, literage, and storage are advanced. The average broker or big buyer does not care to bother with little shipments. A carload or a hundred-ton lot will interest him; but a lot of a thousand pounds, more or less, does not attract him unless he can arrange with some one to gather up these small lots and make up a shipment. On the average it costs about a cent a pound to get extracted honey to the market. This does not include container. The freight on a carload shipment from California to New York is $1\frac{1}{4}$ cents, one cent from Colorado, and about a cent for less than carload shipments east of the Mississippi to the eastern markets. Taking it on the average, some one must pay one cent a pound for freight. The average buyer or broker will not ordinarily handle a crop on a margin of

less than about one cent. He may be able to buy on a margin of half a cent; but he is right now thinking of what Food Controller Hoover may do (for Hoover has already closed the New York sugar exchange), and he does not propose to be caught.

To get down to brass tacks, if the honey sells for 14 cents on the dock in New York, the producer may not get more than 12, and he will have to furnish the container. In the same way a honey that brings 15 cents might bring the producer 13. On the other hand, we know of a number of lots in California that sold, f. o. b. producer's station, for around 13 and 14, and some as high as 15; but the average of the honey has sold for less than that. The producer must remember that some one must pay freight, cartage, literage, and storage, and some one must find the market, and for that service he will charge not less than an average of one cent. "Gleanings" believes that some lots of clover that sold on the docks in New York brought 16 cents; but so far as we can ascertain the most of it sold for less.

Below we print the markets as quoted by the large buyers and by the U. S. Government Bureau of Markets:

CHICAGO.—Several small consignments of honey are appearing on the market. The price of white comb that grades from No. 1 to fancy is 20c per lb. No ambers so far offered. Extracted white of good flavor and body brings 14c in the 60-lb. cans. Barrels bring about 1c per lb. less. Beeswax is ranging from 35 to 38c per lb. R. A. Burnett & Co.

Chicago, Aug. 17.

PORTLAND.—New comb honey is coming in slowly; demand better than last report; prospects fair for later shipments. Very erratic market at present. Very little new extracted is offered, as season is late. Generally speaking, would say that prices will be higher than last year. We quote comb honey, extra fancy, per case, \$4.00; fancy, \$3.75; No. 1, \$3.50; No. 2, \$3.25. Extracted honey, white, per lb., brings 12c; light amber, in cans, 11c; amber, in cans, 10c. No beeswax offered.

Portland, Ore., Aug. 13. Pacific Honey Co.

KANSAS CITY.—Demand for both comb and extracted is improving, while receipts are light. No carlots have been received on this market yet. Most of the supply is native. We quote comb honey, extra fancy, per case, \$4.50 to \$4.65; fancy, \$4.50; No. 1, \$4.35 to \$4.45; No. 2, \$4.25. Extracted honey, per lb., brings 15c; light amber, in cans, 14c. Clean average yellow beeswax, per lb., 40c. C. C. Clemons Produce Co.

Kansas City, Aug. 17.

DENVER.—We are at present selling new honey to retailers at the following prices: No. 1 white comb honey, per case of 24 sections, \$4.50; No. 2 at \$4.00; extracted white, according to quality, 16 to 18c. We are buying beeswax at all times, and are at present paying 34c cash and 36c in trade for clean yellow wax delivered here.

The Colorado Honey Producers' Ass'n, Denver Aug. 17. F. Rauchfuss, Mgr

CLEVELAND.—Old crop of comb honey is entirely exhausted. Only a very little new honey is yet coming in. This sells at about \$4.50 per case. We quote comb honey, new crop, fancy, per case, \$4.50. Supply very limited and uncertain.

Cleveland, Aug. 18. C. Chandler & Son.

ARIZONA.—Everybody is anxious to sell with strong price, except those who were foolish enough to contract at \$7.00 to \$8.00 per case some time ago. Quality is good so far. Later yield, if any, will be lower grade and price. White mesquite extracted

honey brings \$13.00 per case; light-amber extracted \$12.60 per case; light-amber alfalfa, \$12.00 per case. Clean average yellow beeswax brings 30c.

Phoenix, Ariz., Aug. 13. Wm. Lossing.

(NEW YORK).—The honey market quotations for September received by GLEANINGS IN BEE CULTURE from New York were manifestly so much below general quotations there that we do not publish them. These quotations if printed could only prove misinforming and unfair to the honey-producer. In a general way, we can say that extracted honey has recently sold on the docks in New York at from 12 to 15c.—The A. I. Root Co.)

(PHILADELPHIA).—We have nothing to report at this writing. As yet with us there is no demand (usually the summer condition of trade), and thus far no receipts worth speaking of. Beeswax is bringing 40 to 43c. Chas. Munder.

Philadelphia, Aug. 17.

ST. LOUIS.—No comb honey in this market; old stock entirely cleaned up and new stock not arriving. Extracted honey in fair demand. Extracted honey, light amber, in cans, brings 14c; amber, dark, in cans, 12 to 13c; in barrels, 10 to 11c. Clean average yellow beeswax brings 35c.

St. Louis, Aug. 17. R. Hartman Produce Co.

(BUFFALO).—It is impossible for us to quote, since there is no new honey offered on this market. None has come in yet, and it will probably be ten days or two weeks before any arrives. From what we can learn, however, we believe that if we had any new fancy comb honey we could sell the same for about 20c lb. Gleason & Lansing.

Buffalo, Aug. 16.

(SYRACUSE).—Our honey here seems to be of excellent quality. The demand is not great for anything; but some is being sold. We quote comb honey, extra fancy, per case, \$4.80. Extracted honey, white, per lb., brings 15c; light amber, in cans, 14c. E. B. Ross.

Syracuse, N. Y., Aug. 17.

(PITTSBURG).—Practically no demand. We expect better inquiry as season advances. Prices are as previously reported. W. E. Osborn Co.

Pittsburg, Aug. 18.

(DETROIT).—We have no information to offer on honey, as there is very little to be had at present. Detroit, Mich., Aug. 16. F. P. Reynolds & Co.

(GEORGIA).—The demand has been so great our stock has all been sold. The bees are doing finely, so will have a good crop next season. We quote comb honey, extra fancy, per lb., 10 1/4c. Extracted honey, white, per lb., brings 10 1/4c; light amber, in cans, 9c. No beeswax is offered.

Columbus, Ga., Aug. 17. S. S. Alderman.

(FLORIDA).—About the middle of June the demand for honey was greater than ever before. The agents of different concerns came down and bought all the honey in our section—tupelo at 10 1/2c per lb., wild tupelo, 8c. S. S. Alderman.

Wewahitchka, Fla.

(SAN FRANCISCO).—New crop extracted is moving out fairly well, considering the high prices, altho the local market will see a curtailed consumption if prices continue high. It would seem that, as far as the San Francisco market is concerned, it is still unsettled. We quote extracted honey, white, per lb., 12 to 13 1/2c; light amber, in cans, 10 to 11 1/2c; amber, in cans, 8 to 10c. Clean average yellow beeswax brings 35 to 38c. Leutzinger & Lane.

San Francisco, Aug. 14.

(LOS ANGELES).—No comb honey in market. Extracted honey, white, per lb., brings 17 to 18c; light amber in cans, 12 1/2c to 15c; amber, in cans, 11 1/2c. Clean average beeswax, per lb., 40c.

Los Angeles, Aug. 13.

(MONTREAL).—Very favorable report on crop for 1917. We quote comb honey, extra fancy, at 16c; fancy, 15c; No. 1, 14c; No. 2, 12c. Extracted honey, white, per lb., brings 13c; light amber, in cans, 12 1/2c; in barrels, 12c; amber, in cans, 11 1/2c; in barrels, 11c. Gunn, Langlois & Co., Ltd.

Montreal, Aug. 17.

(TORONTO).—The market is in the same position that it was last month. The old crop of honey is exhausted, and prices for new crop are not named.

Toronto, Aug. 16. Eby-Blain, Ltd.

(HAMILTON).—Some new coming in, but not in quantities. Have not purchased any new yet. All old cleared out.

F. W. Fearman Co., Ltd.

Hamilton, Ont., Aug. 16.

(CUBA).—Extracted honey, light amber, in barrels, brings \$1.05 a gallon; amber, in barrels, \$1.05. Clean average yellow beeswax, per lb., brings 35c.

Matanzas, Cuba. Adolfo Marzol.

(MEDINA).—We are buying comparatively little honey, and this is entirely for our Airline use at the present ruling high prices, which we regard partly as the result of *speculative* buying. At this writing we are offering 12c for average white extracted, and for a very limited amount, from nearby points, of extra fancy, water white, we would offer 13c. The price of comb honey remains unchanged. We regard the market as very uncertain, likely to go up or down temporarily at least, the prices today being governed, we believe, entirely by the export demand; and as our quotations to buyers of Airline blend are now made, we find a limit of price above which we cannot purchase.

Medina O., Aug. 20. The A. I. Root Co.

U. S. Government Market Report.

(New York).—Honey arrivals: 316 barrels and 20 tierces, Porto Rico, 1 car California, 800 cases Texas, 15 barrels Virginia, and 825 barrels Cuba. Beeswax arrivals: 3 barrels, 3 cases, 7 bales, Porto Rico; 56 barrels Texas; 40 bags Cuba. Honey market: domestic demand light; export demand fair, but spasmodic. West Indian stock, \$1.30 to \$1.60 per gallon; California, light demand; few sales, \$1.40 to \$1.80 per gallon. Beeswax, market quiet, weaker; few sales. Supply exceeds demand. Yellow, 39 to 40c per lb.; dark, 37 to 39c per lb.

(Kansas City).—Old stock, supplies practically exhausted. New stock, approximately 60 cases native Missouri. Demand light, movement moderate, market strong, all sales in small lots. Native Missouri, 24-section flat cases No. 1, old stock, mostly \$4.50. New stock mostly \$4.50 to \$4.75 per case. No extracted honey on market. Beeswax, receipts very light; demand and movement slow; all sales in small lots; best, mostly 40c lb.

(Denver).—Approximately 22,000 pounds white to light extracted; 1300 cases comb honey arrived. Demand and movement moderate, market steady. Jobbing: comb honey, 24-section cases; firsts, \$4.50; seconds, \$4.00 per case. White to light extracted honey, 11 to 16c lb.

(Minneapolis).—26 cans extracted arrived; all sales in small lots; light local receipts. Local stock, extracted honey, 10-lb. tins, 15c lb.; comb honey, 1 and 2 dozen boxes, 18 to 22c lb. Iowa, no quotations.

(Cincinnati).—One car California, 10 barrels and 30 boxes Indiana, 50 barrels and 3 boxes Kentucky, arrived. Nearby receipts light, beekeepers holding for higher prices. Market very strong, demand light on account of high prices; few sales. New stock extracted honey, light amber, blended, 14c lb. California, no sales reported. Comb honey, fancy white, heavy, \$4.20 to \$4.25 per case; No. 1, white, heavy, \$4.00 per case.

(Philadelphia).—No arrivals comb or extracted honey, no sales reported; 48 barrels Porto Rico reported July 31 still being held. Crude beeswax, new, 40c lb.

(Chicago).—No fresh carlot arrivals. California, small lots, amber extracted, 13 1/2 to 14c lb. Small lots from nearby states, extracted honey, 13 to 14c lb.; comb honey, 16 to 18c lb.

(St. Paul).—One car Arizona extracted, 540 pounds Ohio comb honey arrived. No quotations.

Charles J. Brand, Chief.

Washington, D. C., Aug. 15.

In Stock for Immediate Shipment

800 cases two 5-gallon cans
12000 5-lb. and 10-lb. pails
Shipping-cases for comb honey

Write us

M. H. Hunt & Son, Lansing, Michigan

NOTICE!

Honey . Wanted . Honey

Do not forget, when your crop of honey is ready for sale, to send us a sample. State your price, also how it is put up. We are in the market for unlimited quantities, and will pay cash on arrival. Let us hear from you before selling your crop.

C. H. W. Weber & Co., Cincinnati, O.

2146 Central Avenue

NEW BINGHAM BEE SMOKER



by others have not given the satisfaction desired.

A. G. Woodman Co.

Gentlemen:—Have you the thin good-working uncapping-knives we used to get about 20 years ago, and that worked to perfection?

We sent an 8½ and 10 inch knife and received the following letter:

A. G. Woodman Co.

Gentlemen:—Knives received; glad you sent them at once. They are just what I want and have been looking for but did not know where to get them.

Lyle, Minn., June 21, 1917.

Lyle, Minn., July 5, 1917.

K. H. VOLSTAD.

Many of the most extensive honey producers insist on the Genuine Bingham knives. Mr. N. E. France of Plattsburg, Wis., gave us a fine unsolicited testimonial on the steam-heated Bingham knife, too long for this space. Present prices are: 10-inch knives, 85 cents each; 8½-inch knives, 75 cents each; steam-heated knives with tubing, \$2.50 each. Postage extra.

TIN HONEY-PACKAGES

YOU WILL MAKE A MISTAKE if you do not ask for our LOW PRICES on Friction Top Pails and Cans. We are SAVING MONEY for carload buyers and others of smaller lots, why not you? Our three-year contract is enabling us to make prices a considerable under general market quotations. Let us hear from you, specifying your wants.

A. G. WOODMAN COMPANY
Grand Rapids, Michigan

In 1878 the original direct draft bee smoker was invented and patented by Mr. T. F. Bingham, of Michigan. Mr. Bingham manufactured the Bingham Smoker and Bingham Honey-knife for nearly thirty-five years; and in 1912, becoming a very old man, we purchased this business and joined it to our established business of beekeepers' supplies and general bee-ware. Those who knew Mr. Bingham will join us in saying that he was one of the finest of men and it gives us much pleasure to help perpetuate his name in the beekeeping industry. Bingham smokers have been improved from time to time, are now the finest on the market, and for nearly forty years have been the standard in this and many foreign countries. For sale by all dealers in bee supplies or direct from the manufacturers.

Smoke Engine, 4-inch stove.....	\$1.25
Doctor, 3½-inch stove.....	.85
Two above sizes in copper, 50 cts. extra.	
Conqueror, 3-inch stove.....	.75
Little Wonder, 2½-inch stove.....	.50
Hinged cover on two larger sizes.	
Postage extra.	

Bingham Honey Uncapping Knives with New Cold Handles

We are furnishing the same quality steel, best money can buy, thin-bladed knives that Mr. Bingham manufactured years ago. The old timers all remember these knives and many are writing in as Mr. Volstad in the following letters. The substitutes offered

SHIPPING-CASES PROMPT SHIPMENT

By the time this issue of Gleanings reaches you you will know your requirements for shipping-cases. We have quite a supply of these on hand now and can ship promptly.

Better order at once as freights are slow, and as they are heavy must go by freight. Express would be too expensive. Next month figure out your wants for next year; then send an order for goods on which we will allow an early-order discount. In ordering shipping-cases please remember they have advanced in price 4c each.

F. A. Salisbury, Syracuse, New York
1631 West Genesee St.

HONEY WANTED

Have you any light amber or white EXTRACTED HONEY?
Send us a sample of what you have and state how packed.
We will name you our best spot-cash price.

Friction-top Cans and Pails

WE CAN NOW FURNISH FRICTION-TOP CANS AND PAILS AT THE FOLLOWING PRICES F. O. B. CHICAGO, KEOKUK, IOWA, OR HAMILTON, ILLINOIS: : :

2-lb. cans in crates of 612—per crate.....	\$26.75
2½-lb. cans in crates of 450—per crate.....	22.50
2½-lb. cans in crates of 12—per crate.....	1.40
5-lb. pails in crates of 200—per crate.....	16.00
5-lb. pails in crates of 100—per crate.....	8.25
10-lb. pails in crates of 100—per crate.....	12.50
10-lb. pails in cases of 6—per case.....	.95

Beehives and Supplies

For beekeepers who buy wisely, we have just received ten carloads of "LEWIS BEEWARE," everything bright and new. Quality unexcelled. Send us a list of your needs. We will gladly quote you prices that will save you money.

Save Your Combs and Cappings

and send them to us. Our high-pressure outfits and special equipment will get out all the available wax. The extra wax we get usually more than pays for rendering charges.

For your share of wax we will either pay you the highest cash price or work it for you into

Dadant's Foundation

If your bees are not already acquainted with DADANT'S FOUNDATION you should give them a chance to test it. Their action will be more convincing than our words, "Best by Test."

Dadant & Sons, Hamilton, Illinois

GLEANINGS IN BEE CULTURE

SEPTEMBER, 1917



EDITORIAL

THE OTHER DAY the editor stood at one of the Brooklyn docks, New York, and saw

2000 tons of honey

STARTLING ready to load on a *MARKET* ship for Italy, and *CONDITION*.

more to follow.

Two thousand tons,

or a whole shipload, and selling at 14 cents per pound on the dock! A little of it was mountain sage from California, but most of it was from the bellflower, from Cuba. All of it was honey, as the marks showed, and as the ooze from between the cracks of the barrel-staves plainly showed. If the reader can imagine a stack of barrels and cases 10 feet high 50 feet deep and extending the length of a dock for some 300 feet he will be able to form some idea of the quantity. We were anxious to secure a photo; but, no. Strict government regulations prevented. On asking the superintendent of the dock he assured us that, while he would be very glad to grant us the privilege of taking a picture, he had positive instructions to permit no camera to be used.

This large amount of honey was bought and sold to Paton & Crowell, of New York, to agents of the Italian government.

Fact No. 2.—We learned of another shipment going to the same government, consisting of 1000 barrels of West India honey, selling for slightly less than 14 cents.

Fact No. 3.—A lot of 100 tons of honey from the West Indies was sold to a broker for 66 cents a gallon. Fifteen minutes after arrival at the dock the entire lot was sold at \$1.80 a gallon—a net profit of \$20,000 all in one deal. Said the broker, with a twinkle in his eye:

"You may call that robbery. Say, Mr. Root, if a honey-producer would offer you a fine lot of honey at a price below its market value, would you say to him, 'My dear fellow, I love you so dearly that out of the goodness of my heart I am going to tell you that the honey is worth more than that, and I will pay you the full market price?' Or would you say, 'I will take it,' as I did?

And, again, when a buyer, seeing that honey, called me up on the phone and asked me what I would take for it, I was afraid to make him an offer. The fact was I wanted time to catch my breath. I told him I did not want to sell that day. When he said, 'Well, make me an offer,' I thought I would make a price that he would not be able to accept, as I did not want to sell at the market prices then prevailing. But when he did accept, do you think I was going to say to him, 'My dear fellow, you are paying too much?' Not on your life. When the buyer and producer do not know what a commodity is worth they have got to pay me for what they do not know but ought to know. I ain't in business for my health."

Then he gave a little chuckle and a twist of the hand, suggesting he would do it again if he had a chance.

Fact No. 4.—The Italian government is buying enormous quantities of honey. Their agents have been buying recklessly. In the meantime Great Britain and France, more conservative, seem to have dropped out, altho they are watching their chances; but apparently they are not willing to pay the prices that Italy has been paying.

Fact No. 5.—There appears to have been a large crop of Cuban and West India honey the past season. All of it has gone to Europe.

Fact No. 6.—There is a shortage in the crop of extracted honey in the eastern states as compared with last year. Some estimate it at 25 per cent of last year's crop and others 50 per cent, while a few report a normal yield. There was a failure in Texas, short crop in California, a light yield in Colorado, and a fair yield in Idaho.

Fact No. 7.—All last year's honey, comb and extracted, has been cleaned up.

Fact No. 8.—Brokers and big buyers are scouring the market for extracted honey. One broker is bidding against another, all of which has a tendency to "bull" the market. Said one broker: "The market is de-

ecidedly bullish at the present time; but I am expecting a big slump. When Italy gets filled up, like Great Britain and France, mark what I say—prices will go tumbling, and then the fellow who has been going around the country contracting in advance will be left high and dry, believe me."

Fact No. 9.—The editor got a calling-down in New York for "bulling" the market in some recent speeches at several of the field meets which he attended in the East. Telegrams were hurriedly sent to the big buyers, telling that Root had boosted the market clear up, and that they (the buyers) had got to come across with more. Said one buyer: "Mr. Root, you surely have 'spilled the beans.' We thought you were with us. You will have to come across with more money yourself. Why didn't you keep still until we had bought up and then play your bull antics? You fired your wad too soon."

What do all these facts mean?

They mean that prices on extracted are "bullish," and will probably stay so provided the allies continue to buy honey, and provided, also, that Food Controller Hoover and the allies of Europe do not put honey on the same basis as sugar, so that the consumer can get only a small quantity. And this leads to the statement that the *furore* in honey-buying from Italy is based on the simple fact that sugar has been commandeered in that country. That means that the consumer in Europe can buy only a very limited quantity—not enough to supply his needs or demands. Honey is a superior substitute for sugar. The consumer can buy honey, as much as his pocketbook will allow, and he is actually paying 50 to 60 cents per pound for extracted honey in Italy—the very same article that the producer, in one case at least, sold for at least 66 cents a gallon, or 5½ cents per pound. Here is an extreme case where the consumer is paying about 1000 per cent above the price paid to the producer. What do you think of that? War prices, war freights, submarine insurance, and last, but not least, brokers' profits.

We did not hear very much about the activity of the comb-honey market while in the East. While comb honey will doubtless sell for more than it did last year, it is now bringing somewhat more. It is very evident that the allies do not want comb honey. This commodity must be consumed wholly at home; but the price of comb honey is likely to go up in sympathy with extracted.

There are some things that indicate that Italy is getting wise like her allies, and

will refuse to pay a higher price for honey that is considerably beyond the price of sugar. Whether Italy or the other allies will continue to buy honey, whether they will pay more than they have been paying, no one can tell. It may be that the producer will get more by waiting. Perhaps he will do better to sell now. We don't know, and we don't believe any one else does.



ELSEWHERE WE HAVE made mention of the fact that honey-brokers are abroad



THE BIG
HONEY-
BROKERS.

in the land, and some of them have made big money within the last three or four years,

particularly since the allies have begun to buy honey when they could not get sugar.

We know of one firm that, a few years ago, put \$10,000 into the business, and whose credit at the bank now is good for a million dollars; and we should not be at all surprised to learn that they have bought in the last twelve months a million dollars' worth of honey; and we know of several brokers in New York and Chicago who have bought honey in five and ten carlots; and while they doubtless sometimes make a "big scoop," yet, if our information is correct, the majority of them do not clear over a cent a pound; but even that much on 100-ton lots means a big sum of money.

In these days of war prices there is no doubt that there are food speculators in the land, and some of them have become immensely wealthy within a short time. We have no defense to make for the speculator. He ought to be curbed, and we hope Hoover will do it. A legitimate profit is permissible; and there is no dodging the fact that nearly every one, if he had a chance to make a scoop, would do it if he could; and almost in the same breath the same fellow who would condemn the man for making an enormous profit is the very man who would do some scooping if he were smart enough.

But what about the broker? Is he an unmitigated evil or a necessary evil, or is he an evil at all? All we can say is that there are brokers and brokers, some good and some bad. It is the latter, just as it is in the other professions, that hurt those who are trying to do an honest business.

After a talk with brokers in several of our big cities, we have come to the conclusion that many of them are honest. As one of them very correctly said, "I cannot afford to rob my clients and customers, because that would prevent me from doing

any business with those same people in the future. I am trying to do an honest business with the same people year in and year out."

There is no doubt that the big buyer and the big broker have helped to "bulb" the market on honey. There are so many of them that they bid against each other. Said one big broker in Chicago, "If the buyers would stay out of the field for a while the market would decline; but, no; they must all rush in, with the result that we all have to pay high prices."

There you are. One buyer tries to get ahead of the other fellow; and in the grand rush they boost prices. If they could all combine, they could stand back and say they would not pay more than 10 cents per pound for honey; but fortunately they cannot control each other, with the result that the bad broker and the good broker, the big buyer and the commission man, prevent a cornering of the market.

But perhaps one says: "Why not cut out the middleman? Why should not the beekeepers organize and sell to the markets of Europe direct?" They have been talking that for the last forty years, but have not done it. So far they seem unable to effect the necessary organization to accomplish this. The probabilities are that the middleman will always be a necessary evil. He will have the ready cash, and he will be able to get hold of the very large buyers, such as great corporations and even governments, a thing the individual producer cannot do.



S. D. HOUSE, at the field meet at Camillus, N. Y., told us that the disease we described

 **THE DIS-
APPEARING
DISEASE.** editorially in **GLEANINGS**, page 590, had appeared last season in his locality, and that

he was considerably alarmed, as it cut down his colonies so much that it interfered with the yield of honey. He did not believe it was due to a germ nor to any form of disease—that it was simply a case of malnutrition.

This disappearing or Isle of Wight disease, it will be remembered, comes on during a rainy chilly spell, and just before a honey-flow. During periods of intermittent sunshine the bees have access to pollen and but very little nectar. This thing continues for days and days. At the general opening of the honey-flow the bad symptoms begin to be very manifest; but as soon as the honey-flow is well under way accompanied by

good weather the disease disappears—hence the name, "disappearing disease."

Mr. House's theory is that the intestines of the bees become overcharged with pollen, and that the real trouble is indigestion caused by too much nitrogenous food in the general diet. In other words, they are forced, he thinks, to use an unbalanced ration.

Mr. R. F. Holtermann, of Brantford, Canada, and other beekeepers of Ontario, have found considerable of the disappearing disease this summer, and for a time they were considerably alarmed; but, true to its name, it began to disappear—not, however, until it had done considerable damage in their apiaries. Warm sunshine, lots of it, and plenty of honey seemed to cure it.

Mr. House may have offered the true solution of the trouble. Some two years ago, when the discussion came up, many reported that they cured the disease or malady by feeding sugar syrup in connection with some antiseptic. In almost every case the feeding seemed to mitigate the trouble—sometimes curing it entirely. It was supposed by each of the writers that the particular antiseptic that they used was the thing that did the cure; but the probabilities are that feeding sugar syrup for honey would make up a balanced ration. In other words, the bees were given something that they could digest.



IT HAS BEEN quite generally believed that the feeding value of alfalfa for cattle

was a head off
sweet clover. In
our issue for
July, page 512,

we intimated as much, and now one of the Kansas farmers has come back, saying the statement is not true—at least it is announced that the Agricultural College of Kansas conducted some feeding tests where the cattle were divided in two separate groups. One group was given rations of alfalfa hay, and the other was given sweet clover. The sweet-clover steers won out, gaining 25 per cent more per 100 lbs. than steers fed on alfalfa hay.

This might not prove to be true in other localities; but even if the sweet clover should hold its own on an even basis it will probably take the place of alfalfa.

Sweet clover grows more readily on almost any kind of soil where alfalfa must have conditions favorable. It does not bloat cattle as does alfalfa, and will go deeper thru hardpan than alfalfa. With

one or two exceptions alfalfa yields honey only in irrigated states, while sweet clover furnishes nectar anywhere on any soil.

Sweet clover is a great honey-plant, and is destined to be the most valuable one in the United States if we except white and alsike clover. It yields honey every year, dry or wet, on any soil, sweet or acid, altho it prefers good soil with lime in it. It has in some states made land that was worth only \$10.00 per acre now worth \$200 per acre. It is so much in demand that its seed is the highest-priced of any seed in the market.

On the other hand white and alsike clover require favorable conditions or else they will not give up their nectar, if, indeed, they will grow at all.

Beekeepers should take pains to herald these facts everywhere in their locality.

Perhaps it would not be out of the way if they would carry pocketfuls of seed and scatter it in localities where nothing but useless weeds are grown. Nobody is harmed, and, moreover, the farmer and the beekeeper will be greatly benefited.

WE HAVE BEEN using this plan more and more of late. In some respects it is more reliable

DIAGNOSING than a mere examination of the combs. If the colony shows bees going out

BY THE FLIGHT OF BEES

and in rapidly, and coming just as rapidly, it is as sure as fate that they will need room soon; and without room they will swarm. A colony that has started in to work well should be kept busy by keeping ahead of it.

Entrance diagnosis saves time—hours of it—when time is most precious. Away back in the early 70's and 80's A. I. Root used entrance diagnosis very largely, and the writer as a mere boy then remembers distinctly how he used to catch us up after we had been all over the yard in detail, comb by comb; and after a survey of five minutes in the beeyard he would show where we had failed to do what ought to have been done earlier. We used to imagine he had some X-ray eyes, and could look clear thru a colony, for we did not see how under the sun he could tell from the outside in three seconds what that colony was doing, and what it would be likely to do unless taken care of.

In the years that have passed since, by the use of X-ray eyes on other hives we have come to the conclusion that entrance diagnosis, so far as the need of room is concerned, in respect to the future is more

reliable than looking down into the hive itself, because it shows what the colony is going to do, and that means swarming unless room is given. A colony may be ever so full of stores; but unless its bees are active at the entrance it is not likely to need more room.



ONE GREAT advantage of the combless package of bees is that it will not carry brood diseases.



BROOD IN POUND PACKAGES

On account of that, the business has grown to enormous proportions. But lately some have been shipping pounds of bees with a frame of brood. In regard to this, Provincial Apiarist Morley Pettit, Ontario, writes:

I wish to enter a protest against the shipping of bees in pound packages with a comb of brood in each. One of our beekeepers purchased recently from 10 three-pound packages with a comb of brood in each. A few days after he had received these he found both American and European foul brood in the colony, and in every case the disease showed in the comb which came with the package. I would not care to have you mention the name of the party along with my name; but there should be a strong protest against the shipping of bees on so-called natural stores or with a comb where they would have brood. Such a practice simply defeats the main purpose of the combless package, and makes it a possible carrier of disease instead of one which is practically safe against the carrying of disease.

MORLEY PETTIT,
Guelph, Canada.

Provincial Apiarist.

We have for years shipped nuclei with bees and brood. Our yards are under careful surveillance and state inspection, and so far we do not know of a case where brood disease has been carried that way. But if one proposes to ship bees in pound lots let him go to the limit and be safe. On the other hand, no one should buy nuclei or full colonies unless he knows the party of whom he is buying is taking every precaution against brood disease. Diseases are scattered pretty well over the country now, and it behooves the buyer to be careful as well as the shipper.



DID YOU EVER NOTICE that a frame full of sealed or hatching brood is about two-thirds as heavy as a frame of honey of the same thickness of comb from capping to capping? When

WEIGHT OF SEALED BROOD

"hefting" a colony to determine the amount of stores, one is liable to be misled if there is a large amount of sealed brood in the hive.

SOME twelve miles from Fort Plain is the home of P. H. Elwood, one of the most prominent of the New York bee-keepers. He is now in his seventieth year, and has been keeping bees for more than 50 years. His first connection with bees was in 1862, when a bee-tree was found and 100 pounds of honey obtained.

Mr. Elwood and Capt. Hetherington formed a partnership which was continued for five years. The former had made a start in beekeeping with the old box hive; but during the partnership, coming in frequent contact with Moses Quinby, who lived but ten miles away, they decided to use his hive. Mr. Elwood is even now using the Quinby hive (altho he owns others) secured when buying bees. At the start they bought bees which proved to be diseased with American foul brood. Hetherington advised running them for extracted honey on account of the disease, altho only three weeks before the close of the white-honey harvest, removing the queens and allowing all the brood to hatch, then shaking the bees from the combs and destroying the latter. But the trouble practically disappeared, and, therefore, they decided to winter them, and that was the last they saw of the disease.

In reply to a series of questions (for I knew that such disappearance of the disease must be a very rare occurrence), Mr. Elwood said that there was no question about its disappearance, and that it was undoubtedly American foul brood, for Quinby, Hetherington, and Elwood all knew the disease. They claim that (altho rarely the case) if the bees clean out the larvae promptly after they die, and before they becomeropy and sticky, the colony may be cured. This may explain why some have found that combs from colonies with American foul brood can sometimes be used without spreading the disease; and there have been cases in which an inspector has pronounced a colony slightly diseased, and later no disease could be found. Mr. James Armstrong, one of the most efficient inspectors in Ontario, told me that if a diseased cell is stirred up with a toothpick, destroying or in a measure breaking up its adhesive contents, it is possible that the cell might be cleaned out by the bees. In fact, Hetherington and Elwood bought and used a lot of combs that had been in contact with the disease. However, I do not for a moment think that any of the above gentlemen

LESSONS OF FIFTY YEARS

A Famous Pioneer in Beekeeping Interviewed, Tells of Many Things Done and Learned

By R. F. Holtermann

would advise depending upon the bees to cure American foul brood.

The second season the partners continued to run for ex-

tracted honey and had an average of 112 pounds of honey which sold at 15 cents per pound in kegs. During the same season one colony produced 582 pounds of extracted honey, the colony gaining $57\frac{1}{4}$ pounds in two days while the basswood flow was on. Nearly all the surplus for the season was produced from basswood, as clover had been largely a failure.

PRICE OF COMB HONEY.

Then they engaged in comb-honey production, and during those years they received an average of about 5 pounds of comb honey per colony. The first season it sold at 28 cents per pound, the honey being built and sold in two-comb glassed boxes which were weighed with the honey and sold at the same price.

INCREASE.

Ever since the box hive was dropped they made increase artificially and sought to prevent natural increase. The combs in the brood-chambers were examined and the queen-cells broken down. This method of prevention of swarming was practised 44 years ago. Shade for the hives was also used as a preventive. As above stated, they used the large Quinby hive which had a capacity of 100 pounds of surplus on the sides and one story on top. Occasionally they tiered up. The plan was to take the partly filled sections at the sides and finish them on top.

ITALIAN BEES.

The first year Elwood was in partnership with Hetherington they decided to get rid of their black bees, and, therefore, Elwood bought an Italian queen from Quinby and reared queens from her. Her progeny did splendid work, and Mr. Elwood has used Italian blood ever since. There were, however, so many black bees about that the Italians could not be kept pure.

PARTNERSHIP DISSOLVED.

This partnership lasted five years, during which time they increased to about 400 colonies and secured an average of about 50 pounds of comb honey per colony, altho the price received was gradually lowering. The size of the section was also reduced. The first single section was $5\frac{1}{4}$ x $5\frac{1}{4}$ x 2 inches, and held about two pounds of

honey; and the next size of section was 4 1/4 x 4 1/4 x 1 5/8.

MR. ELWOOD'S LOCALITY.

Since then average yields have gradually decreased. Buckwheat is very unreliable; and, altho the introduction of alsike clover has to some extent made up for the lack of basswood, still the country has become less suited for beekeeping. Mr. Elwood does not consider his section of the country a particularly good bee-country at present, especially since basswood has largely failed and the seasons are more extreme, either too wet or too dry. One reason why basswood does not yield well is because the woods are too open and the soil about the basswood roots dries out more, owing to the access of sun and wind. Last year, however, quite a lot of basswood honey was secured.

GLASSING SECTIONS.

Since first producing section honey Mr. Elwood has continued to glass his sections. He said:

You can tell your folks that Elwood has not got out of the woods yet on glassed honey. He got into the woods 40 years ago, and his circles always bring up at the same place. Some of the beekeepers of the Middle West have been anxious that he find himself; but, "Shall the blind lead the blind?" When I was in New York a number of years ago I saw a wholesaler putting glass on honey bought from an Illinois beekeeper. When my son was in the city this season he saw the same operation repeated. These Middle West men say it is positively wicked to sell glass for honey. What shall we do about it when several million people in New York and other cities in the East want glassed sections? Shall we tell them to stop encouraging wickedness and to begin buying "hayseed" honey that comes in carriers with a bale of hay (more or less) in the bottom of the carrier for a cushion? And the Western beekeepers after a good deal of hard work have obtained the consent of the railroads to charge them double price for moving their honey unless they buy these carriers and furnish the hay. Of course, if the beekeepers will persist in using a section and packing-case so that the honey has to support both the section and the packing-case, he will have to pay the penalty in freight bills, in brokerage, etc. With reasonable care glassed honey will carry safely without carriers. For many years we have had no losses to pay, altho much of our honey has been shipped direct to the buyers. What breakage has occurred has been thru carelessness or bad usage, and the railroad and express companies have paid the loss.

When the Black Hills was a mining camp our glassed honey went there safely, traveling the last 150 miles by stage; and when H. K. & F. B. Thurber & Co. were in business they sent some across the ocean to the

Paris exposition, and it arrived in sufficiently good condition to obtain a first prize when exhibited in the original packing-cases. There is no doubt that glassed honey carries more safely in a delivery wagon than any other package.

Not long ago I obtained a section of one of the finest and best advertised brands of carton honey. I pulled the section out of the carton and found a bruised spot on one side; and on turning it over there was a corresponding spot on the other side. There was no leakage, but a spot marring its beauty, and enough of a bruise to set it candying. Uncovered honey is so attractive to flies and other insects and vermin that in some places it has already been ruled out by boards of health. If this ruling should become general the question to be decided is whether comb honey is to be encased in cartons or glass. This statement is supported by the following letter from a wholesale dealer in New York:

MR. H. R. WRIGHT:

Dear Sir:—If you send me any honey in the future, be sure to send it either in glass or cartons, as the Board of Health rules are very strict here on displaying unglassed or uncovered honey. Therefore, grocers have to keep it in the case. This they do not like to do, as it is not a decent display.

Yours truly,

S. M. ZAIBER.

A score of years ago a leading firm of retail grocers in New York said they would buy none but glassed comb honey, and they are still buying it. One of the reasons they gave was that, as far as possible, their goods must display and sell themselves, and that their clerks had no time to show up goods. A few boxes of glassed comb honey set in a window where the light shines thru them will sell more honey than a ton of carton honey placed on the shelves, and it will also sell more than a whole grocery sown knee-deep with advertising. The beauty of putting up honey so it sells itself is that this kind of advertising is inexpensive. The live grocer is awake to this; and when he gets a consignment of peaches he puts them, not in a cool cellar, but out on the sidewalk in the dust and heat of the street where they sell themselves. How many customers will inquire for goods that have their season, unless such goods are displayed? Some of our friends said that the bothersome stamp-act would put a finish to glassed honey. It has not done so, but, on the contrary, has put new life into this style of package. The reasons are that, as comb honey is now sold by the dozen or piece, we give, in addition to the standard assortment of honey, added protection to the goods; added protection to the health of the consumer; and with each section-box a double page of advertising that sells the goods. All this is done at only a slight advance in cost over cartons. No need of stamping such packages, for every cell of honey shows.

LARGE OPERATIONS.

Not much sugar syrup is fed for winter. The fall of 1916, none at all was used. For

several years Mr. Elwood had put into winter quarters 1300 to 1400 colonies of bees, and for eight or ten years he began the honey season with something like 1000 colonies. He has run 11 apiaries with 100 or more colonies in each. Now he has seven apiaries with a less number of colonies. In fact, he prefers to have not more than 70 colonies in an apiary. When he had his largest yields he had only 40 in an apiary.

SWARM PREVENTION.

Mr. Elwood is an advocate of a large entrance, two or three inches wide by nearly a foot in length, and still practices artificial increase, obtaining the same when the colony has the swarming impulse. He takes away the queen, one or two cards of brood, and enough bees to protect them.

objection to Mr. Elwood's plan, for on an average about five per cent will thus swarm out. However, he prefers to take his chance on this.

REMOVING SURPLUS HONEY.

The bee-escape board is not used for the removal of surplus honey, and just here I can not help wondering if in this respect Mr. Elwood has not got a little of the old fossil sticking to him the same as I had when I put the wire-cloth bee-escape between a brood-chamber and six supers with bees. But, never mind. The bees did not smother, but came out of the supers before I went back next day to remove them. And Mr. Elwood is equally successful with his plan. He finds the neatest way of removing supers is by smoking and shaking the bees out, but mostly smoking, giving a shake at last by striking the super on his legs to get rid of hanging bees. The comb-honey supers are piled near the wagon-track, and stacked twelve to fifteen high. A bottomless bag (see illustration) made of duck is slipped over the piles of supers, protecting them against robbers yet allowing the bees to collect and pass out into the bag. The tops of the bags are folded well to keep the robbers out. The same kind of covering is used over the horses' heads to protect them.

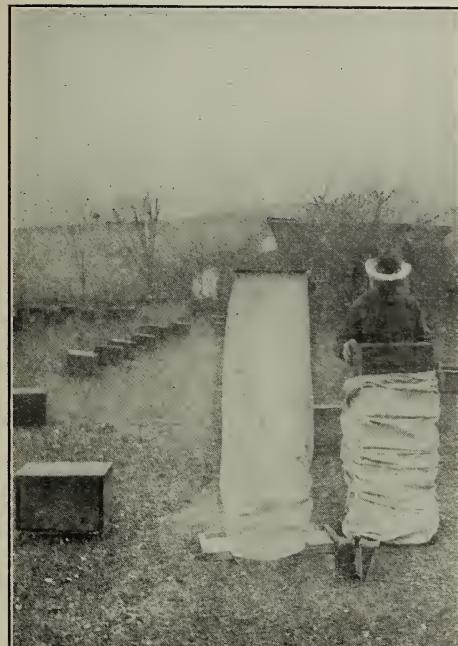
CARNIOLANS IMMUNE.

When European foul brood was bad, Mr. Elwood got 100 Carniolan queens, and he and Capt. Hetherington found these resisted the disease better than any other bees they tried. The greater the vigor of the bees the better they could resist the disease, altho all could become in a measure immune.

WINTERING IN THE CELLAR.

Mr. Elwood winters his bees entirely in the cellar. He used to winter outside; but in his section of country bees sometimes do not get a fly for four or five months, and that is hard on bees wintering outside. In what is called their "barn cellar" he once wintered 1000 colonies, but that was too many. A colony which winters badly will often disturb others in the immediate vicinity. He would like to put just enough bees in a cellar to keep up a proper temperature. The building, or cellar, is 20 feet wide, 60 feet long, 7 feet high, and the colonies were tiered four high. Going up from the cellar is a large chimney with three flues, the center one for fire, the outside ones for flues. Artificial heat can be applied, but there has been no occasion for its use. The object in having heat in the center flue was to create a current of air in the others, but this object he accomplished by means of a fire upstairs.

Brantford, Canada.



The bottomless bags prevent robbing, but permit the few bees in the supers to escape.

Into the nucleus he puts at least four frames of brood with the queen, getting the additional combs from another colony. Sometimes on the next round he adds brood, bringing the number up to seven combs. The colony which has been left queenless, with queen-cells started under the swarming impulse, are gone into on the next round, which is nine or ten days later, and all but one cell broken down. Sometimes the colony will swarm out when the young queen goes out to mate, leaving the parent hive hopelessly queenless. That is the one

READERS of the February issue of GLEANINGS may recall an article by the editor, Mr. E. R. Root, in which he described his

brief visit to our home late last November, at a time when roads were almost impassable and rain was pouring incessantly. In describing his impressions while with us, as I remember, he noted that we kept a lot of bees, had a number of different sizes of hives, among them some very large ones, and that we also had a pair of twin boys. As my grandfather and great-uncle were twins, both rather extensive beekeepers for their time, and both used very large hives, possibly these things might be put down as "running in the family."

In accordance with my promise to the editor to send him an article giving some points of management with the different sizes of hives, etc., I wish first of all to dispel any illusion held by any one that I have a number of different sizes of hives by choice, for it requires no argument to prove that an all-around uniform equipment is an asset not to be despised when it comes to the matter of running a lot of bees economically so far as time is concerned, not to mention having supplies all alike, etc.

If I may be pardoned for making a few personal references, I will say that, owing to circumstances over which I had no control, I found myself 17 or 18 years ago with my wife and three children, and not \$100 of available cash or negotiable paper. Now, while a good wife and family of three children are assets that many a man would give a great deal for, yet the very fact of their possession means something else must be obtained as well—the means of making a living.

To make a long story short, as I had some knowledge of beekeeping I decided to go into the business as fast as I could, at first working at other jobs when I was not busy with the bees. Twenty-four years ago my grandfather died, and a year later his twin brother passed away. Each had about 160 colonies, which were sold by auction after their deaths. D. A. Jones lived near us, and for a while they both had used the Jones hive; but, disliking the short combs running crosswise with the entrance, they soon changed hives and adopted the very large hive mentioned by the editor, and known locally as the "Byer" hive. After the auction sale, of course, these 300 or more colo-

THE HIVES I USE, AND WHY

Several Different Sizes Successfully Used; the Result of Circumstances and Not of Choice

By J. L. Byer

nies were scattered over the country around us, most of them within a radius of ten miles. The inevitable results followed. The majority of

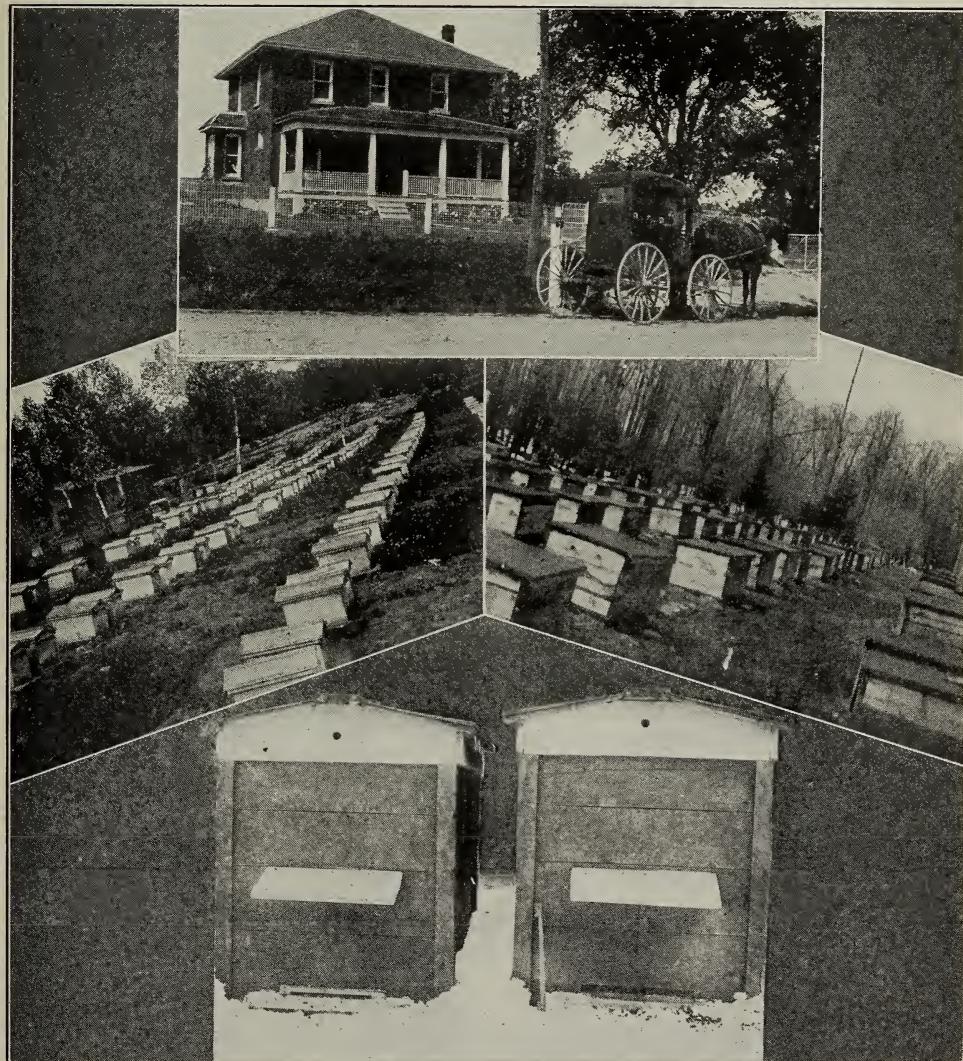
the purchasers neglected looking after the bees, and in many cases were glad to sell for less than cost. About the time I started in, many of these lots of bees were available, and that accounts for my having a number of these big hives, which are too large even to suit me, altho I get just as good crops from them as from any other hive.

This hive is 18 inches square, inside measure, and 14 inches deep, taking 12 big frames. Nearly all of our bees are on three different sizes of frames, all L. length, but of different depths. The very large Byer hive being 14 inches deep, and the standard L. hive 10 inches deep, the big hive is just a bit over twice as large as the eight-frame L. The ten-frame Jumbo is 11½ inches deep. In using these three sizes of hives for years and hundreds of each style, I can say there is no appreciable difference in yields obtained, one year with another. Last year, in four apiaries near home, all run by myself exclusively, except for help in extracting, and with localities and flora identical, there was not a difference of five pounds per colony average of any one apiary over another.

Is there different management for the very large hives as compared with the eight-frame L.? Assuredly there is; and if a mixed equipment has done nothing else for me, it has certainly broadened my viewpoint on the matter of sizes of hives. These very large hives are, of course, run a good deal on the let-alone principle. Generally (and especially if we have a buckwheat flow) the bees in these hives require no fall feeding. They winter well as a rule and in the spring, strange to say, they are ready for supers as soon as the small hives. After they once enter the supers, if room is given as required, practically no swarming results; and these rousing big colonies held together during the season will store surplus if any is to be obtained. Of course, with frames of this size full supers are not handled much—it is a question of handling frames instead of supers. I often work alone in the apiary, taking in honey and bringing back the empty combs and accounting for 2500 or more pounds of honey in a day; and I do not think that handling frames is such a drawback as some think.

In working the eight-frame L. hive for extracted honey at out-aparies, naturally an entirely different system must be carried out than is the case with the very large hive. First of all, heavy fall feeding is always necessary. Then in the spring, as soon as more room is needed, an extra story of worker combs is given without an excluder. At the opening of the flow, if swarming is to be prevented without regular weekly examinations (something I cannot or will not do) radical methods must be followed, and I prefer what is known as the Demaree

plan, or a modification of it, as circumstances may warrant. All the brood is taken from the lower story but one comb, the rest of the space being filled with combs or foundation—the latter preferred if the flow is apt to be at all long. The excluder is placed over the brood-nest and then a super of drawn combs followed by combs of brood in the next super above. This should be done before the bees have any notion of swarming; and if honey is coming in fast another super will be necessary in a few days. Much or all depends upon



J. L. BYER'S HOME

One of the apiaries just after being moved 250 miles.

The same yard packed for winter.

The hive preferred—the double-walled ten-frame Jumbo.

abundant room being given if swarming is to be absolutely controlled, even when using this plan.

Perhaps it may surprise some when I say that the ten-frame L. size is our hardest problem to solve in the matter of swarm control; and the reason is that it is not large enough to run on the let-alone plan, and too large to run on the plan outlined for the eight-frame size. With me it is a problem to get all the dark fall or spring honey out of the larger-sized hives before the clover flow. Unless all dark honey is out of the combs, the Demaree plan can not be practiced or the clover honey will be spoiled. With the eight-frame L. size of hive it is comparatively easy to get about all this honey used up before the clover flow, and these brood-combs are then used for extracting purposes as fast as they are emptied of brood and filled with honey, with no apparent injury to the white honey crop.

The hive which I use extensively, more than any other, is the ten-frame size commonly called the Jumbo. The management is much the same as outlined for the very large hives, and with pure Italian bees we have little trouble with swarming in most seasons.

Answering the question, then, as to what hive I would use if starting all over, I can say that my preference is for the ten or twelve frame Jumbo size. If forced to use the L. frame, then I suppose I would choose the eight-frame size in preference to the ten-frame L., as the latter is not big enough, or too big, to suit me in running out-apiaries.

I winter outdoors altogether, about half the bees being in single hives permanently packed and the rest in two-hive cases. Personally I do not like the quadruple cases, as they are too bulky and we get just as good results with the smaller cases.

The lower picture, page 677, shows two packed hives in our home yard. This style of hive suits me as well as any I have ever used, and I want nothing better. This hive is made by a local manufacturer; and a strong point is the corner, which is made of two-inch stuff with a one-inch square sawed out of one corner. This inch-square piece is used inside to nail to, while the right-angled strip left is nailed on the corners as the picture shows. This keeps out the water at the corners where sheeting is nailed, and also prevents nails from drawing out by reason of warping or other causes. The bottom is fast. I do not want loose bottoms on packed hives. The entrance is ten inches by one inch deep for summer; and with the

block in place for winter (as shown standing in front of the hive) a space is left 8 inches by $\frac{3}{8}$ deep. (I have never been an advocate of extremely large entrances as used by some, as I believe that too large entrances are often given, especially in localities where the nights are very cool.) One full-depth super will go on inside of the extension top, which is not packed. The hives are made of cedar, which combines strength with light weight, and lasts for a lifetime.

The second picture shows part of one large apiary, the four rows containing 160 colonies having just been placed in position after a long move by train. To the right can be seen some of the bees that were there before these 160 were transported. Some of them have supers on. There are more than 100 colonies not shown in the picture. This yard is wintered in the two-colony cases.

While I naturally wish that all my bees were in uniform hives, yet the fact remains that they are not, and I have to make the best of it. With a full equipment at all yards, such as lots of supers, etc., one or more extractors at every place, and no moving of supplies from one place to another, I probably have less trouble than most would believe. Then I have never felt that I could afford to change all these hives, for, of course, I could not sell them for what they are worth to us.

I might as well confess that, after all this working with mixed equipment, if a yard of bees were offered me today the first question would not be, "What style and size of hive are they in?" So it looks as if I were past redemption. If combs were all good and straight, built from full sheets of foundation, the chances are that a deal would be made, if price was right, even if the bees were in a style of hive different from any I now have. While it is only natural for a beekeeper to have a hive preference, yet one should not be too sure that the style of hive will do so much better than the other fellow's, for after all it is a question of management adapted to each style of hive, as I have abundantly proved to my own satisfaction during the last ten years.

[For our readers' information, and that these readers may correctly weigh the testimony of Mr. Byer as given in this article, we wish to say that Mr. Byer has proved himself one of the most efficient beekeepers in Ontario. He gets results in honey and dollars, and the very fact that he has succeeded in spite of a serious handicap in the beginning and without outside capital to boost the business along, makes his opinions all the more valuable.—EDITOR.]


 FROM THE FIELD OF EXPERIENCE

Conversations with Doolittle

"I have a colony which has been queenless for several weeks. Will the instructions for introducing sent with the cage be applicable to such colonies as this one?"

It is doubtful if the instructions sent by most breeders of queens for their safe introduction would be applicable to such a case. Some years ago a man in Canada ordered one of my best breeding queens, and asked for a plan of safe introduction. I wrote him, telling him how I generally succeeded, also how to put the cage on the combs, etc., giving all the items which I considered necessary. A week or so later he wrote telling me that he had lost her in trying to introduce her, and incidentally mentioned that he introduced her to a colony that had been queenless for three or four weeks, and asked what I supposed was the trouble. I suppose his colony had a queen or something it was cherishing as a queen. He did not say whether or not he had given this colony unsealed brood at different times during the time they had been queenless; but from the tone of his letter I judged that he had not. And so in answering this question I wish to call particular attention to and to emphasize this thought: Never try to introduce a queen to a colony which has been long queenless without first giving such a colony unsealed brood, so as to know to a certainty that they are queenless. According to very many letters during the past, asking about the loss of queens in introducing, I am led to believe that more queens are lost in trying to introduce them to supposedly queenless colonies than from all other causes put together.

But I think I hear some one asking, "How shall I know to a certainty that a colony has or has not a queen, by simply putting in unsealed brood?" In all of my experience, covering more than forty years, I find that any colony not having laying workers, or an unfertile queen, will always start queen-cells on brood given them. Even with laying workers, the bees will sometimes start queen-cells; but where eggs are scattered about in the cells promiscuously among the brood given, after three or four days have elapsed, it is easy to know that such bees have something they are tolerating as a queen. As a rule, one might about as well try to get a queen into a colony that has a laying queen as to try to introduce one to a colony having laying workers;

and colonies being without a queen for three or four weeks are quite likely to have such workers. If a colony builds queen-cells, and no eggs are visible among the brood given, after four days, it is safe to assume that it is queenless, and that, if the right amount of care is used, a fertile queen may be successfully introduced. But if a colony does not start queen-cells on brood given it, it is a dangerous undertaking to try to introduce a queen.

HOW TO KEEP DRONES THRU SEPTEMBER.

Another party wishes me to tell how to keep drones until late in the season for the mating of queens reared late, in localities where there is not a fall honey-flow. In this locality it is often the case that colonies do not rear drones after basswood ceases to secrete nectar. For this reason, at the close of the basswood honey harvest I go to each hive having my drone-breeding queens and take all the drone brood they have and mass it together in one hive, generally carrying the bees on each frame along with the brood. This brood thus collected makes that hive two, three, or four stories high, according to the amount of drone brood found. The more of this brood that I find in the egg and larval form, the better I am pleased, as this brood will not be out of the cells for nearly a month, so that these last will be in full vigor during September, which month is as late as good queens can well be reared. Before massing this drone brood over the colony, which should always be a very populous one in worker bees, the queen should be taken away, as only queenless colonies will keep drones after the honey-flow is over. The colony is then allowed to rear a queen of its own; and as soon as she gets to laying she should be taken out, and the bees allowed to rear another queen from her brood, and so on, thus keeping the bees in a queenless state, or rearing queens all the time. If this precaution is not taken the drones we are trying to preserve will be killed off as soon as a queen has been laying long enough so that larvae have hatched. If, by being kept thus queenless, the colony becomes weak in worker bees, brood should be given them from other colonies so as to keep them strong enough. Such a colony of drones requires much honey, for each drone fills up on honey every time it leaves the hive for a flight, which is every pleasant day after it becomes of suitable age. There is generally



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enough honey in the combs containing drone brood to last well into the fall, or till about the time our late-reared queens are ready for mating, when it is advisable to feed some warm thin syrup each day about noon, when it is warm and pleasant, so as to insure a full flight of the drones.

Borodino, N. Y. G. M. DOOLITTLE.

Letters from a Beekeeper's Wife

The Honey Shop, Sept. 1, 1917.

Dear Sis:

I am tired tonight, for the whole family has been bottling honey all day—even Billy has been helping by sticking on labels and putting the jars on the shelves. You know we told you when you were here—it already seems ages ago—that we were going to sell some of our honey in pint and quart jars for a little more per pound to fat, honest Mr. Day, instead of selling it all at wholesale. That is what we have been bottling. I went to town yesterday; and when I saw seven or eight people looking in Mr. Day's window I went over to look too. It was our observation hive full of live bees that had drawn the crowd. (Yes, eight makes a crowd in our village at eleven o'clock in the morning!) They were all so absorbed in watching the moving mass of insects that not one looked up as I joined them. Beside the hive were pyramids of our jars of honey, shining like bottled sunlight. I was so proud that I could scarcely refrain from tapping my neighbor on the shoulder and saying, "They are our bees, and I bottled that honey!"

Florence protests, whenever she helps with the honey, that it is a shame to take it away from the bees when they have worked hard all summer to gather it. Her father insists that the bees owe him their surplus for the rent of his hives and the care he gives the inmates. He always ends the argument with a twinkle in his eye as he says:

"Besides, doesn't everything in the world exist for man's particular use?"

He knows that that will start me off; for of all the illogical and conceited man-made theories, that one seems to me the worst, which insists that nature is made for man. We have only to look about us to see how each species is struggling for its own existence, each one ruthless in its disregard of every other species, and, if need be, preying upon other species. I suppose the advocates of the theory that the world has been

evolved for man reason that, since man likes honey and robs the bees of it, the bees exist solely to make it for him. They get it from the nectar of flowers; therefore the flowers exist to produce nectar for bees to take, to make the honey for man! The flowers grow in the soil; therefore soil exists to nourish the flowers, which produce the nectar, for bees to take, to make the honey for man! If the soil were not warmed by the sun, the flowers would not grow; therefore the sun exists to warm the soil, which nourishes the flowers, which produce the nectar, for bees to take, to make the honey for man! Doesn't it make a good House that Jack Built? To follow such reasoning to its logical conclusion, if our tiny sun exists for man's sole benefit, I suppose all the other suns in the universe, that we call stars, the light from which takes years to travel to us, exist to make our sky beautiful at night! Man is a modest creature!

I did not mean to give you such a dissertation, but even in would-be scientific papers I have seen the nature-exists-for-man theory and it always heats me. To think of puny little man taking such a theory seriously in the face of the great facts of nature! Bah!

When I began this letter I meant to tell you about Rob's plan for educating the public—meaning our town—to like dark honey. Do you remember exclaiming over the delicious flavor of that tulip poplar and locust honey when you were here, and wondering why you never saw any on the market at home? That set Rob thinking. He has always contended that clover honey is little better than some of the darker honeys, and that to put up the white color as a standard is arbitrary and artificial. Next Monday when the county fair opens, in addition to the honey and bee exhibit that Rob is going to have, he wants the girls and me to go in white dresses, with white aprons and caps, to hand out samples of as many different kinds of honey as we can get, on crackers. We are to have a color scale of honeys on the table to use in the demonstration. The girls think it will be a lark for we will see everyone we know and many that we don't.

So think of us on Monday in spotless white, telling men, women, and children how good dark honey is and passing out a little dab on a cracker! I wonder what kind of demonstrators we shall make. I wish you could be here to help.

Yours deep in the bee business,
MARY.




FROM THE FIELD OF EXPERIENCE

Bee Paralysis or Isle of Wight Disease

Early this season certain indications of disease began to appear, altho at that time they were not recognized as such. At one time I remember mentioning that it was strange to see so many old worn-out bees so early in the season. Still there were really no great numbers, and the matter was soon forgotten. Again we saw a queen and a few of her bees that apparently had a headache, for they were rubbing their heads most energetically. Later we noted a few bees being pulled out at the entrance at a time when there was no evidence whatever of robbing, for honey left exposed for several hours was not touched by the bees.

When visiting one of our yards, July 16, we immediately decided that the bees had paralysis, for we found several colonies with a lot of bees crawling about, bunching here and there in the grass for five or six feet all around the hives. A little distance from the entrance the grass was several inches high, and bees could be seen laboriously climbing the grass only to tumble back helpless before reaching the top or just as they attempted to fly. On a closer inspection one could see that some of their legs seemed paralyzed, and were simply dragged along as they crawled. Some were quite dumpish while others tore about at an amazing rate, turning this way and that, rubbing their bodies, heads, and legs, in so frantic a fashion that sometimes they lost their balance and fell headlong. A few were seen to hop in their efforts to fly. If they could only succeed in getting a start some could fly right off, and others would fall after flying only a few feet. A few had their "feathers" entirely worn off and were quite black and shiny; others—in fact, nearly all—were quite normal in appearance, and not one was noted with distended abdomens. At one hive we saw at one time as many as fifteen or twenty struggling bees being tugged at and unceremoniously hauled away. I picked up a few of these, and, by the way, found the stinging apparatus in perfect working order. After watching these I saw that they became dumpish; but when breathed on they again went thru their wild antics. Some would repeatedly raise their bodies high up, and, with their front pair of legs, appear to be pulling their tongues out to an amazing length. After becoming exhausted, they would let their heads fall forward, rolling a little to one side and resting upon their mandibles. The well bees paid no attention to them after removing

them from the hive; but the sick ones apparently found some comfort in each other's society and would bunch together, sometimes using their antennae to go over each other's bodies, especially over the heads.

We read all we could find on the subject, and came to the conclusion that no one knows much about it, but that, so far, it has never proved very serious in the northern states, and would probably disappear of its own accord as soon as warm settled weather arrived. However, two colonies were so badly affected that the odor of dead bees could be noted several feet away. So we sprinkled sulphur on the dead bees in the grass and also treated one colony with sulphur. Whether this did the slightest good I cannot say; for with the advent of warmer weather all the colonies began to improve and were practically well again in about three weeks.

The above description applies only to the worst cases; but all of our 300 colonies showed some slight trace of the disease. We sent a diseased queen and a few of her workers to Dr. Phillips for experimental purposes. He said he could learn nothing from the bees, but had introduced the queen and would watch for further developments.

Wondering how extensively the disease had spread, we visited most of the apiaries near us, and one as much as twenty miles away. Five of the yards contained from about 20 to 105 colonies each, one apiary being composed almost entirely of Italians. Yet we found each colony more or less affected, altho only two of the beekeepers had noted anything unusual in the behavior of the bees. If inspected late in the afternoon, one would not be apt to notice the symptoms, in mild cases. But on a bright day, an hour or two before noon, the disease appears to show up at its worst.

Now as to results. We did not lose a single colony, and in only one apiary did we lose any appreciable part of the crop because of the loss of bees.

Our bees have been more cross this season than ever before. Even in the height of the honey-flow, when no bee would touch exposed honey, they would sting most viciously. Since the season, by careful manipulations it is possible to open one of these same colonies without smoke and yet find them quiet on the combs and not at all inclined to sting. We wondered whether the disease could have anything to do with this characteristic.

IONA FOWLS.

Oberlin, O.




FROM THE FIELD OF EXPERIENCE

Do Bees Rob?

Robbing is an infraction of a moral law, constituting a felony. The bees know no law except that of instinct, and they unconsciously follow it, yet they are guided entirely by that instinct. Langstroth says (edition of 1870), "Bees cannot under any circumstances resist the temptation to fill themselves with liquid sweets." No more clear explanation as affecting their actions in this line could be given. This irresistible force that compels the bee to be constantly on the search for sweets does not confine their efforts to gathering nectar from flowers alone. They enter the hives of weak colonies when there is little to be had from flowers, and that is why they are accused of robbing. When nectar is abundant one may leave honey open in the apiary all day, and they will not molest it, for they are displaying the same energy in gathering nectar that they would in taking up honey from an open bait during a dearth of nectar.

Nature may have a hidden hand in directing bees from one hive to enter another. When a colony is no longer able to protect its stores, it is natural for a provision to be made that will enable the honey to be saved to other bees, rather than to enemies of the bee. In this provision the bees of a colony at the first sign of weakness are subjecting themselves to enemies of the bee, and to offset this the hive is entered by other bees and the available sweets are saved.

So beautifully are many of nature's ways worked out that the real object is concealed from the mind of man, and in many cases our troubles with the bee is only our failure to see the true course of nature.

The queenless colony has no hope from nature after all possibility of requeening is passed; the colony is on the decline; and without the aid of man it must die. So why should not instinct lead other bees to save that which their neighbor is too weak to care for, and place it where it will be saved?

Man is the chief offender in causing bees to go wild for sweets and attempt to enter other hives for it. If they were to follow their natural tendencies as provided by nature the cleaning-out of weak colonies would not excite them to so great an extent. But man comes along, tears off the lids of their hives, leaves honey exposed to their sight and smell, and excites their nature for acquiring sweets by the only source available, even to the entering of other hives. So they are called "robbers."

P. C. CHADWICK.

Beekeeping in the Island of San Domingo

About the middle of the seventeenth century, Captain Count de la Croix introduced the first bees from Martinica, and these were European bees, or, to be more precise, German bees. They multiplied very rapidly; and before long the sale of honey and wax became one of the main industries of this island, first of the Republic of Haiti, at that time in the hands of the French, and later on in the remainder of the island. Beekeeping was developed more especially in the provinces of Barahona and Bani in the southern part of the island, Higuey in the east, and Monte Cristy in the north. Beekeeping was practiced in the most primitive manner up to about fifteen years ago. The colonies were simply placed in open barrels, made from the trunk of the royal palm, and little or no attention given after that except to extract the honey and wax twice a year. This was also done in the most primitive manner, many bees being killed in the process. There are still many of these antiquated hives to be found, especially in the south and north, but modern beekeeping is finding its way very rapidly into the most remote corners of this republic.

About thirty years ago a German first began to introduce the modern system of beekeeping in Puerta de la Fe, but did not obtain very satisfactory results, and abandoned the project. Some time later Mr. Alfredo Pellerano, in Manzano, made another attempt in this direction, but this was likewise unsuccessful. About the same time a friend of mine started a modern apiary on a small scale in Puerta Plata, using Italian bees, but this met the fate of the others.

The first successful modern apiary was started in 1903 by the writer; and altho this has suffered many hazards, modern beekeeping has since then been firmly implanted in this republic.

In the beginning, of course, we had considerable difficulty, inasmuch as we did not even have any books on beekeeping in the Spanish language; but this difficulty has now been overcome, and the beginner, in these days, finds it very much easier than did the pioneers.

In my next article I shall take up in detail the state of the beekeeping industry in this republic at the present time.

Santo Domingo.

GEO. POU.

FROM THE FIELD OF EXPERIENCE



Apiary of J. A. Siejas, Santo Domingo, Dominican Republic.



Apiary of Pedro A. Bobea, La Vega.

FROM THE FIELD OF EXPERIENCE

The Evil that Men Do

"H. C. L." was not talked about then. We had it with us, to be sure; but they had not caught the bug and identified it, and given it a yard-long name. But we knew we had *something*, because the payments on our home-mortgage came to an abrupt stop, whereas previously a comfortable little lot of digits were annually knocked out of the principal. It was about then, no doubt, that I informed Madame that I had at length made up my mind firmly to keep a bee.

In the beginning it was just a fad to the alien's mind. What dreams I had I kept to myself. Even the "family" knew only that I found much time to spend up attic where the bees were (for details see GLEANINGS, page 355 for May), and produced from that abode of the gods divers pounds of delicious honey. When that time came I was cordially invited to invent a few more fads of like proportions, and family armed neutrality (with the accent on the armed!) vanished like honey-on-the-pancake before the five-year-old. So I made up my mind to branch out and attempt a serious increase in the income of the clan by the honey route. I fitted up an attic room for six or eight hives, and actually installed four by purchase and swarming. If one strong colony could net me 140 pounds of comb honey in one season, half of which we ate and the other half sold at 25 cts. per pound without the least trouble, either for eating or selling, four hives would net more than that proportion; for 70 pounds was all we could get away with ourselves in one year. So I devoted that summer to the building up of mammoth field forces for next year's campaign; cuddled them thru a bitter winter; fed them thru an abnormally late spring, and saw them hie forth in a solid stream on the first warm polleny day of spring with a heart of joy. The sun was shining. The tops of the sugar-maples gleamed with ruddy fire. All the world was attune to its fair influence. So was an Irishman.

Night came, and with it quiet. It was too quiet. I became uneasy, and with a lantern went skyward three steps at a time. A couple of dozen bees were in sight as I lifted up the outer board and peered down thru the net screen. Where were the bees? Next day, in grief and wrath, I found them. They littered the ground round about those maples—dead, to the last bee. What had happened? Why, it was in the early part

of the great Massachusetts moth-war. An Irish tree-guardian had taken the opportunity when those maples were in full flower to spray them all heavily with arsenate of lead. That was all. Redress? Bless you, no. It was a city affair. "If yez want to kape bees, mister, kape 'em at home."

Now, I knew an alderman who was good. There are such. I went for that alderman. I talked to that alderman. I instructed that alderman in matters of flower, pollen, bee, fruit, which is the simplest A B C of nature round us, and made a *pro tem.* impression. He promised that "next year" things should be run differently. They were. Meanwhile I was minus four big colonies, and minus hopes of reducing any mortgage in the near future. I had to begin again! So, after some time was lost about it I started with one more colony, beginning again on the ground floor; and by fall I had that one built up to size, and a smaller swarm alongside. Once again I had a winter of high hope; and, secure in an alderman's promise, my visions of wealth waxed with the lapsing days. Spring came; the maples reddened; the bees made bee-lines thither till the air smoked with their speed, and they came back rejoicing with their thighs yellow with much bee gold. The queens were on their jobs in both hives. Soon there was a dancing, golden mist in the sunlight before each entrance where the young bees were learning aviation. It was June, and both hives were crowded to the doors with young. Then came a day.

The old bees—to a bee—hummed their way to a woodland near by. There they stayed. That morning that Irish treesprayer had been abroad. In the open, every dandelion, every clover-blossom beneath each tree, was drenched with the poisoned shower; and in the woods, not a jewel-weed, even, was left in the underwood unvenomed. He was thoro, that Irish individual. So is the devil. How close the kinship be, I do not know. One thing more I know, however. A big market-garden next to that wood was heavily planted to beans. If the owner got his seed back he did better than I think; for not a wild wasp or fly came out of that wood to that bean-field alive after that spraying. Again I sought our city fathers, and urged that the spring spraying ought to suffice before the flowers were out in the forest, provided the workmen had been faithful at their mothwork in the fall. There was some overturn in politics about

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then, and our Irishman was fired. More consideration was promised to us bee-men for the coming year; and, be it known, others there were who lost three times as many as I did, and could afford it better, for that matter, when all is said. So, once again I began at the bottom of my bee-ladder and slowly started again to climb.

Perhaps the forestry folk were considerate, or meant to be. I did not get a chance to learn; for the fired Irishman set up for himself as a sprayer-by-the-job, and once again I lost what bees I had. Remember, too, each time my hives were simply crowded with young, all of which starved to death for lack of bees to nurse them.

Right there I gave it up. It was too heartbreaking. So to this day, in the late fall the forestry folk go thru the land spotting egg-clusters and clipping wintering nests of moth; and in the spring they spray; and in June they spray again, and in that June spraying they end all hope of honey-work for me.* There are others who are not near woodlands; and for them there still is hope and stores of honey. I see their happiness, and rejoice with them that the earth is not all evil—only in spots thereof. But as to that—did you ever read of a certain most beauteous and amiable lady of high degree surnamed Macbeth, and her terse comment concerning a certain spot? One Shakespeare reported it, 'tis alleged—the some deny it—and anyhow 'twas most ungentlemanly of him or somebody—to listen. However, she said it. Nuff ced.

Boston, Mass. JOHN PRESTON TRUE.



Just Jerk 'em Off

That P. C. Chadwick should express surprise at Louis H. Scholl's ability to jerk off 40 pounds of honey per minute certainly astonishes me. Several years ago I worked a few days with Mr. Scholl and have since adopted his management thruout, except the shallow divisible-brood-chamber hive. I see no reason in the world why a person should spend a minute to take off a 40-pound super of comb honey when he can just as well take off from 20 to 30 supers.

* Since the above-recorded tragedies occurred, it is but fair to add that the city forester has made efforts to spray with a mixture that is repellent to bees. I understand that it has had some success. A considerable proportion of the bees were repelled by it and escaped the poison—not all, by any means, but enough to encourage further experimentation.

Why, in the name of common sense, monkey away so much time, unless it should be to encourage robbing among the bees?

In my earlier years of beekeeping I followed closely the advice given in bee-text books—I have a lot of them—but at different times I lost several colonies by robbing. Then one day I received an invitation from Mr. Scholl to come to New Braunfels, Texas, and see how honey is taken off the hives. Since then I am no longer bothered with robbing.

The hive-covers are jerked off, smoke is blown over the frames, while the hive-tool is forced under the super, and off goes the super on end in front of the hive. These manipulations are repeated with other supers; and before the bees of the first colony know what has happened to them, 20 to 30 supers are off and ready to be loaded on the Ford auto. To save time is the main object. Get the supers off in a hurry, no matter if some queens are carried along. The whole point is to start with your load before any bees think of robbing. Is not this much more simple than closing up hives and smearing them over with kerosene to prevent robbing which you have encouraged with your tinkering?

Slow driving for a mile or two with occasional stops of a minute or so will clear the supers of all bees unless perchance a queen happens to be present; but even that does not cause me to lose any sleep, for the queenless colony will raise a new queen and these late queens will produce the best honey-gatherers the next season. I have often wished that every single queen had been killed the summer before; for in that case, when it came to jerking off honey there would always be something to jerk.

Last season I increased from 440 colonies to 560; and, altho receiving a low price, I sold over \$2000 worth of honey. I have my bees in 16 apiaries from 4 to 30 miles away from home. Last year my wife and I did all of the work and hauled all the honey home on the Ford. At home the old combs were extracted, and the nice white comb honey was all packed into cans, every can labeled, weighed, cased, and hauled to the railroad station—all this without any outside help. Only 75 days were actually spent on the bees and their honey.

Do not fool with bees unless you know how. If you do not know how, come to Texas and learn.

Lacoste, Texas.

LOUIS BIEDIGER.

FROM THE FIELD OF EXPERIENCE

Tapping a Bee-tree in Australia

One morning, knowing of a swarm of bees that were in a gum tree, a friend and I started out to get them, armed with smoker, ladder, rope, and kerosene-tin. The ladder being barely long enough, we secured the top by passing the rope around the tree and then proceeded to cut the combs out one by one. In the early part of the previous year my friend had removed some bees from this hole, and in doing so had cut an entrance almost as big as the hole itself. Later in the year this swarm had taken possession and built comb right across the large entrance, and there they had been all the winter, with the wind blowing directly on to the combs. It speaks well for the mildness of the Australian winter and the hardiness of the bees that they should have survived such an experience. Unfortunately we found them suffering from foul brood. The open-air life had evidently not made them disease-proof.

Having placed the combs in the kerosene-tin, the next problem was to get the flying bees into it, as, after driving them from the hole with smoke, they clustered on the tree-trunk at the top of the ladder. I held the corner of the tin containing the combs close to the bees, and the bulk of them marched right in. We left the tin with combs at the bottom of the tree so as to collect the flying bees. Later we destroyed the combs and ran the bees into a clean hive.

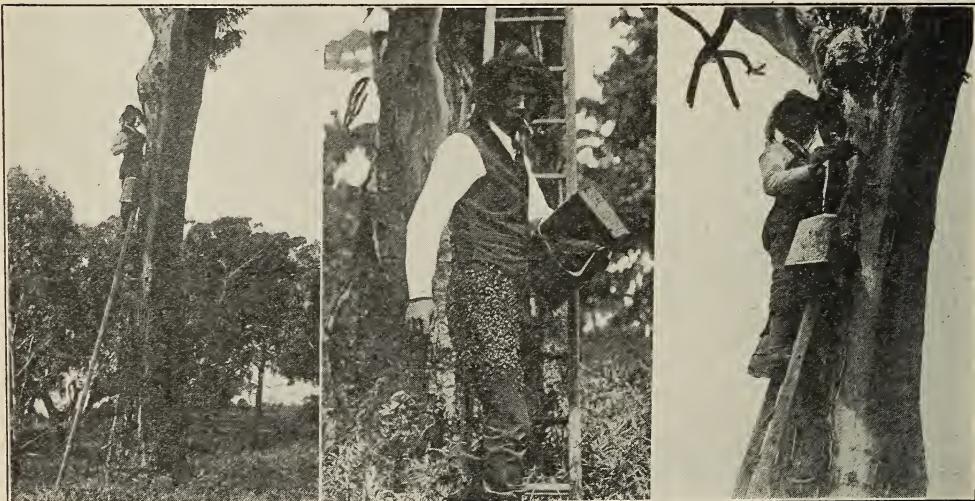
Melbourne, Australia. B. BLACKBOURN.

Is Honey a Luxury?

The honey salesman occasionally hears that "honey is a luxury which ordinary people should use very sparingly, especially in times of high prices." If this were true, there would be reason in the argument. But honey is *not* a luxury, and it should be the business of all those interested in real food economy, as well as those engaged in the honey business to make known the truth.

According to modern standards of efficiency, two factors enter into the classification of an article of diet as a luxury—viz., price and food value. However low the price, if there is little or no food value, any article is a luxury. Probably the average person would hardly think it possible for cabbage to be called a luxury; but one of the recent prominent writers on the subject of food values says, "Only the rich and improvident can afford to pay more than a cent and a half a pound for carrots, turnips, cabbages, and squash." That statement was published in a book two years before the time when cabbage rose to the sublime height of fifteen or twenty cents, so that it was under perfectly normal conditions, that this conclusion was reached. What is the truth, then, about honey?

1. Price. Not long ago I was confronted with the statement that a few years ago the father of a certain merchant sold honey at ten cents a pound, retail (at the time in question it was selling at twenty-five cents). I simply cited the fact that less than twenty



Taking bees from a gum-tree in Australia.

FROM THE FIELD OF EXPERIENCE

years ago my father sold eggs in his store at ten cents a dozen; but at that time eggs were selling at about forty cents; so unless eggs are considerably higher in food value than honey they should be classed as a greater luxury than honey.

In regard to the price of butter, much the same situation prevails. At present butter is retailing at nearly twice the price of honey. In fact, a pound of the best comb honey can be bought as cheap as oleomargarine. For some time during the last winter honey was actually cheaper than "oleo."

The facts are that while the prices of most things have been soaring from fifty to three hundred per cent during the past year, honey did not advance at all for many months; and the retail prices even now have not been raised in proportion to other foods. On the basis of price alone, however, no decision can be reached, and we must, therefore, turn to the consideration of the other deciding factor—

2. Food value. Perhaps most people think that in the "land flowing with milk and honey" the milk furnished the substantial part of the diet, and the honey was simply dessert. It might be of interest to all such to know that the food value of honey is more than four times as much as that of milk, so that honey is not only one of the most delicate and delicious of all foods, whether natural or manufactured, but it also excels many if not most of them in actual food value.

Scientific investigation during the last century has resulted in a great change in our understanding of foods and the purpose of eating. It was formerly supposed that food was taken almost entirely for the purpose of rebuilding wasted tissues. But it has now been proven that the body tissue wastes only three or four ounces per day, and the amount is practically the same whether we rest or work (see "The Nutrition of a Household," pp. 16, 17, by Brewster). Now, if we needed to eat only to rebuild this waste tissue, a very little food would be sufficient. But C. Stanford Read, in his book, "Fads and Feeding," points out the importance of another purpose of eating, which is, to produce heat and energy. He says the importance of this purpose is apparent when we realize that, "Whereas the body may waste for a lengthened period and yet live, it rapidly dies when the source of heat is removed or even greatly lessened."

Again, on this same point, Brewster (p. 16) says: "The starches and sugars, prin-

cipally, which appear in only a small quantity in the substance of the body, are the real nutrients which do nine-tenths of the body's work. They are taken into the living tissue, exploded, thrown out again and renewed, almost as rapidly as the gasoline vapor in the cylinder of a motor car. Modern science and immemorial experience alike testify that what counts in food is its fuel value." As Mr. Brewster puts it in another place, "We are built of flesh; but we run on sugar, precisely as the simpler engines of the automobile and motor boat are built of steel and run on gasoline. We continually use up and renew a substance of which the body at any single moment contains very little; so that, like any other explosion engine, we use up our weight of fuel many times over before we wear out our substance."

From these statements it is very evident that fuel value is by far the most important factor in determining food value. On this score we need have no fears for honey. A glance at the following table will show that it compares favorably with some of the most common articles of diet, and considerably surpasses some which the average person would pronounce indispensable necessities:

Bread	1216 calories per pound
Eggs	720 calories per pound
Milk	320 calories per pound
Molasses	1225 calories per pound
Maple syrup	1250 calories per pound
Strawberries	200 calories per pound
Honey	1420 calories per pound

The average person requires 2000 to 2500 calories per day to supply needed heat and energy, so that it will readily be seen how near a single pound of honey would come to meeting the requirement. I am not advocating the exclusive use of honey, however. But there are some advantages about honey, besides its high fuel value. First, it is a fact that honey contains about 75 per cent of dextrose and levulose, two forms of sugar which are taken into the blood without requiring digestion. For this reason quicker results may be obtained with honey than with most other kinds of food. Ordinarily it requires about 150 to 200 calories to digest the food we eat each day. For this reason honey would have an even higher food value than would at first appear, for none of the potential value would be lost or used up in digestion.

To draw conclusions, we have but to return to compare eggs and honey, for in-

FROM THE FIELD OF EXPERIENCE

stance, in price and food value. Since the fuel value of honey is twice that of eggs, and the price of eggs is nearly twice that of honey, it is not hard to see which is the real luxury. In the case of butter, the fuel value of honey is not much over half that of butter, so that at present prices there is little choice between the two; and since both are high in food value they cannot properly be classed as luxuries. Comparing honey with lean meat, it would take more than two pounds of meat to furnish the energy of one pound of honey.

Warren, Ohio. JAMES A. BROWN.

[While Mr. Brown's article is in the main true, it seems to me it might be misleading. Honey is the finest and most healthful concentrated sweet in the world, but we must be careful not to claim too much for it. A perfect food must contain all the nutritive elements of the body—proteins, carbohydrates, fats, minerals, and water, in their proper proportion. Honey is a highly concentrated source of energy; but one should be careful not to seem to advise its substitution for other valuable foods. Most of us need more bulk in our diet to regulate body processes. It is all right to substitute honey for candies, marmalades, jellies, and sweets generally; but be careful not to lead people to suppose that alone it is a perfect food for human beings. Combined with whole-wheat bread and milk it makes a well-balanced meal.—STANCY PUDEREN.]

An Ideal Location

I believe this apiary, only one-third of which shows in the accompanying photo, is as nicely located as any that can be found. The place is protected on all sides by evergreen trees, and, further back, by mountain ridges. Last year we wintered without packing. The entrances face the east, and the earth is banked up around the hives to keep the cold wind from blowing under them. On the east is a large mountain which is a great help, for during the winter months it keeps the sun from shining on the hives and thus tempting the bees out when it is too cold.

For advertising our honey we use this photo with the inscription: "This is the Apiary that Produces the Famous Skougaard Honey." These pictures are placed in store-windows and other public places, where they attract much attention. When enlarged and painted in natural colors they make the best advertisement we ever used.

To dispose of the crop we believe in advertising until everybody about you knows about the honey. It pays to satisfy customers, even if money is apparently lost in doing it. Satisfy one customer and thus sell a hundred gallons of honey to his neighbors. Honey is selling here now at 45 cents a quart. Four years ago it was 4 cents a pound. Twelve cents a pound is the average for this crop. M. L. SKOUGARD.

Parowan, Utah.



Where all conditions are ideal for the bees.

FROM THE FIELD OF EXPERIENCE

Hives and Methods Applicable to the South

Beekeeping in the South offers peculiar conditions, and is an entirely different proposition to that of the more northerly states. The beginner naturally reads and selects the methods of the successful practitioners of the North only to find them entirely inapplicable to southern conditions, and practically all of the literature is by northern authors unfamiliar with conditions which confront beekeepers in the South.

The very beginning of the season presents a difference; and while the man further north is putting his bees out of the cellar, or unpacking, the southern man finds his hives boiling over with bees, and he is face to face with the swarming problem which is followed by steady brood-rearing until as late as October. So it is evident that methods must be adjusted to different conditions.

The beekeeper in the South who tries to use the contracted brood-chamber or even



The 10-frame Jumbo hive, the ideal hive for southern beekeeping, in practical use in the town lot apiary of L. E. Webb, Morganton, N. C.



The divisible brood-chamber hive. Both the shadewood and the extra ventilation are important.

the standard brood-chamber is doomed to failure at the outset. The bees must be fussed with continually, and he finds that the methods of forcing the bees into the super generally force them out instead. The key-note of success in the South is the plan of having an *unlimited* brood capacity, which is the only way a man giving but part of his time to the apiary can be successful.

Getting bees into the supers offers no trouble if during the long breeding season the queen is given unlimited room. Why, the way they pour into the supers is a revelation. And with our breeding conditions, the queen, if given room, will put tremendous colonies in the supers; otherwise she will worry one with swarms thruout the year, regardless of manipulations, unless they are so radical as to be impracticable.

Three methods are adapted to southern conditions as proven by careful tests; the use of the ten-frame Root Jumbo hive; the divisible brood-chamber under a modified Scholl method, using three shallow bodies permanently for brood and shifting the top

FROM THE FIELD OF EXPERIENCE



The story-and-a-half brood-chamber (Wilder method).

one (or sometimes the middle one) to the bottom at intervals of about ten days or two weeks; and the use of the 1½-story or shallow-super addition to the regular body, shifting occasionally on the J. J. Wilder plan.

The shallow divisible and the 1½-story plans give splendid results, having only the drawback of considerable heavy lifting, especially when supered, while the Jumbo colonies peg along with their tremendous force of workers thruout the season, asking only for super room, requiring no fussing other than to keep them with good queens.

The fact that there are so many wild black bees in the woods in many sections of the South makes it far more satisfactory to buy queens from breeders guaranteeing pure matings than to have the trouble of replacing many mismated queens of one's own rearing.

More bees die of starvation in the South than in almost any other section of the country, and this usually occurs late in the spring during cool rainy spells after brood-rearing has well advanced, and often when

the bees are nearly ready to swarm. So the standard hives often make feeding necessary, but the methods shown eliminate all that worry.

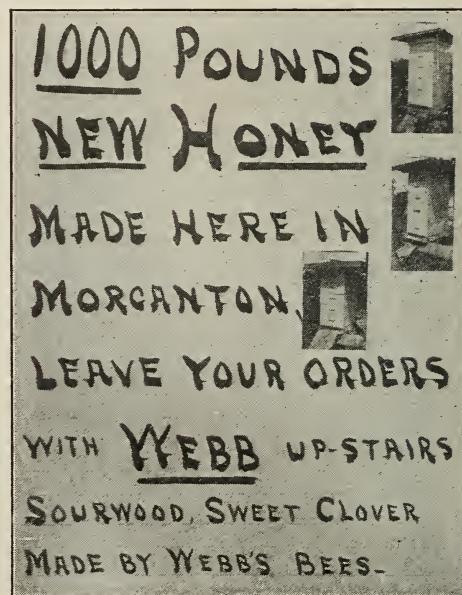
Aside from the advantages mentioned, a still greater advantage is the excellent wintering and heavy spring brood-rearing resulting from the colony having room for almost unlimited stores, which is the greatest asset to the business.

The accompanying photos are illustrative of the methods mentioned. The hives were supered according to requirements at the time (July 16) for the production of section and chunk comb honey in combination supers.

Likely conditions in other sections of the United States are such that beekeepers would call these methods inapplicable; and many will do so without sufficient tests, as it seems beekeepers as a class are prone to stick to a set rule, even when something better awaits them. In fact, it seemed to me at first like a radical variation from the standard methods; yet I consider my decision to depart from the standard methods to be worth infinitely more to me than everything else I have done.

Morganton, N. C.

L. E. WEBB.



Webb's method of selling honey. This is put in a prominent show window, together with supers of honey and extra sections. By means of this display, he sold over 1400 pounds of honey in three days.

BULLETIN
471 of U. S.

Department of Agriculture is very enlightening on the subject of sac brood. It is decidedly comforting to

know the virus causing the disease loses its vitality in water or honey or in the combs in about a month, and in even less time in fermenting or putrefactive liquids or in the sun. While we should like to know how the life of the virus is carried over the winter, the facts as shown in this bulletin will be helpful in combating this brood disease.

* * *

One of the unique things about beekeeping is that we are always meeting with some surprise every year. The present season was the latest known in more than fifty years. There are never two just alike. Then some year a plant we had thought worthless to the beekeeper will give a most surprising yield of nectar. One year a thunder-shower or a north wind will check the flow of nectar, while in other years it seems to make little difference.

One of our surprises this year was a yard in a new location that had given a great yield of honey-dew. While other yards were giving us snowy-white combs of clover honey this one had most of its combs white and handsome on the outside, but filled with what looked like a pale ink. Two tons of honey-dew in sections is not pleasant to think about, but it can be extracted and kept for spring feeding, and the combs melted will give us 125 pounds of choice wax. All together that yard, with present sugar prices, will give us a good profit. In more than fifty years this is my first experience with honey-dew in supers. Of course, it was something of a surprise.

* * *

Bee inspectors for a long time have recognized the probability of the spread of European foul brood by bees entering a nearby hive. Indeed, finding one hive in a yard with the disease well advanced, and a number of hives in the immediate vicinity in the earlier stages of disease, seems almost sure proof of it. I have found two or three such groups in a large yard. But when we find a single colony in the earlier stages of the disease at the further end of a yard or perhaps in a neighbor's yard a mile away it has seemed a little doubtful if that could be the way the disease had spread, and yet it has been thought possible, but very difficult to prove. On page 528, July,

SIFTINGS

J. E. Crane

Mr. R. F. Holtermann gives some facts he had picked up while visiting New York bee-keepers, which seem to prove that such is the

case. Golden Italians were introduced into a yard where there were hives badly diseased. Mr. Stewart, inspecting some four miles from this yard, found some of these yellow Italians among black bees, and traces of disease. He had no doubt they had come from the diseased apiary four miles distant. This seems to me a most valuable addition to our literature on this subject.

* * *

"Handsome does, so handsome is." See cover page of GLEANINGS for August. I can not quite agree so far as buckwheat is concerned; for a field of buckwheat as it grows in New York or the southwest corner of Vermont is a beautiful sight. It even surpassed a field of clover in the multitude of its tiny flowers, and it would be just as beautiful if it gave us no nectar.

* * *

We had a fairly good flow of honey from clover during July, and a good crop of honey will be harvested in western Vermont—as large, I think, as last year. The quality is fine as a rule, altho some dandelion was carried up into supers the first of the season in some yards.

* * *

I don't know just how to express my admiration of Stancy Puerden's vigorous words of protest at the criminal blocking of the food bill by senators who ought to know better. Is there anything in all the world that so fools a man as a liquid with a little alcohol in it?

* * *

Careless grading never pays, says G. T. Stark, page 594, August, and he is right. Every section in a case should be as near the others as possible, and there should be marks on the outside that will tell what to expect.

* * *

One of the pleasures of yesterday was the good news that the U. S. Senate had passed the long-longed-for prohibitory amendment to the constitution. Hurrah! Surely "the world do move."

* * *

Boy Scouts render excellent assistance in the care of bees this year when help is so scarce.

IT WOULD be a great thing if every one could be induced to use honey in place of sugar in hot drinks. Allow that only half the population uses hot drinks, and that each one uses only one ounce of honey daily for sweetening, it would take more than three million pounds of honey to fill the demand. The great thing in that is not the amount of honey used, but the amount of increased health and vigor of the people. You, my reader, probably cannot do a great deal toward securing a national custom of that kind, but you can follow the custom in your own case, and the benefit to you will be just the same as if the whole nation were at it.

"WITH extracted honey bringing more per pound by the carload than comb by the single case, we see little encouragement for the comb-honey man. Better run everything you can to extracted. Probably it will pay you to extract the bulk of your section honey also, saving the combs for next season. The editor has a hundred cases or so that he proposes to treat in just that way. The honey, wax, and probable increased cost of sections and starters next season will far overbalance the labor, at present prices. Looks wicked, but will pay."—Editor Bixby in *The Western Honey Bee*.

I HAVE just finished reading "Happy: the Life of a Bee;" and after reading again the notice of the book, page 568, July GLEANINGS, feel moved to say to the writer of that notice. "Don't you think that the beautiful manner in which the book is written has beguiled you into being a bit too charitable when you characterize as 'poetic licenses' statements that are decidedly *not* 'scientifically true as to facts'?" To make a book interesting is it only necessary to fill it with errors? Take this: According to the book, before the old queen issues with a prime swarm her successor leaves her cell and is fertilized. Do you really think 'the interest is not lessened but rather increased by the poetic licenses' of that sort? If so, what a chance for adding interest the author missed when he didn't say that the drones lay all the eggs"!

G. M. DOOLITTLE, you say, p. 604, "Now, the white capping of combs takes much more wax than that transparent capping the dark Italians use, where the combs in sections look so watery and uninviting." I wonder whether nice measurement would

STRAY STRAWS

Dr. C. C. Miller

really show any difference in the thickness of cappings. At any rate it has generally been understood that white capping was because a

film of air was left between the honey and the capping, while in watery capping the honey was filled up against the capping. You know that the whitest capping becomes watery if kept in a place where the honey absorbs moisture, and I suppose that's because honey takes the place of the film of air.

PARALYSIS. E. G. LeStourgeon, in *The Beekeepers' Item*, defends with vigor his theory that paralysis is caused by soured nectar. He says: "Only nurse bees seem to contract the disease.... We have repeatedly cured the disease in widely distant places by removing the bad stores or by providing food that was wholesome—and we have been able to produce typical cases by feeding fermented syrup at a time when the nurse bees were obliged to use these unfit stores for the preparation of food for the larvae." Mr. LeStourgeon seems a candid sort of man, and the cure is so easy—just give abundance of wholesome stores—that it is surely worth trying.

"WILL BEES start queen-cells above an excluder with or without supers between?" is a question, p. 632, and Miss Fowls refrains from replying, because "so much afraid of Dr. Miller." I may be dangerous to some folk, Miss Fowls, but not to you. I like you. If I had been asked that question a year ago, I should have replied that rarely would cells be started over an excluder with a laying queen below. But this year I've used the Demaree plan with nearly all colonies, and in about every case cells galore have been built above. All but one brood was raised to the third story, with no brood in the second. If the brood is in the second story, I think cells will not generally be started. It makes little or no difference whether cells are in the first story.

E. S. MILLER says, "If you have any European foul brood around, frequent examination is important. It should not be permitted to get beyond a few cells. If a hive is found with, say, half a dozen bad cells, treat it at once in this way: Remove the queen and mark the hive. In about ten days use the hive-body, bees and all, as a super on some strong colony with queen-excluder and a sheet of newspaper between. See that there are no queen-cells. I am

presuming that your bees are Italians. In this way I was able to get rid of all European foul brood several years ago after having it in worst form."—*Domestic Beekeeper*, 266. That looks like a nice way to do when there is no objection to having one less colony. Treating the case early is excellent advice. Some have reported success by merely putting all brood above an excluder, leaving the queen below with empty combs or foundation.

THE *British Bee Journal* is running a beautifully written serial, "The Life Story of the Honeybee," by Oliver G. Pike, F. Z. S., F. R. P. S. On page 31 occurs the statement concerning the worker that "her time is short, three to five weeks being the extent of her existence in summer, then she dies worn out by work." For more than a half a century six weeks has been the agreed life of a worker in summer; but do we know positively anything about it? When so good authority as the *British Bee Journal* cuts down the time one-third, it is desirable that we should find out about it. My guess would be that six weeks is a little too long, and three to five a good deal too short.

On the same page occurs this concerning the death of the worker: "Over-worked, weary, and worn away by ceaseless labors, she just reaches her home, fails to enter, then falls dead or dying on the threshold of the city she has lived and worked for." I balk at that. If true, there ought to be at least a thousand bees dying at the entrance of a strong colony daily. Did you ever see a hundred? But where they do die has always seemed a mystery to me. Few dead bees are seen, yet millions die in a summer from a large apiary.

FROM the financial columns of the *Chicago Herald* I learn that business men are discussing the effect upon the candy business of prohibition during the war. The sale of candy is immense. The statement is vouched for by an investment barker, "that in Chicago, the greatest meat market in the world, more candy than meat is consumed." The dry movement in the western and southern states, where liquor has been abolished, has resulted in a large increase in candy and chocolate consumption. It will be the same all over. Pure-food laws "gave the candy industry the first great impetus; but the second great incentive, no doubt, will be due to the fact that candy is a natural substitute for alcohol." Will not all this help at least a little the sale of honey?

C. E. FOWLER, you say, p. 610, "I propose that, instead of breeding from the best swarm or from the best strain, we breed from the best swarm of the best strain and

leave the scrubs alone." If you do that you're all right; but why muddle the beginner with any such advice? If he has two strains in his yard, how can he tell—how can you tell—to which strain a given queen belongs, so long as you don't know with what drone she mated? And if he breeds always from his best colony, isn't he pretty sure to be breeding from his best strain? I don't believe I can do any better—and I'm not sure you can—than to follow the simple motto, "Breed from the best queen."

LET ME endorse most heartily Doolittle's view, p. 523, that for the every-day beekeeper full-sized combs are the thing for nuclei, and that a nucleus with a young queen is the place to get holes in combs filled in with worker comb. [A good point right here: A good many times beekeepers have combs that are good, except the drone-cells in one corner or two or three corners of the frames. These ought to be cut out and filled in with worker comb by the bees, when they will build worker combs. Doolittle's plan would work all right in such cases.—Ed.]

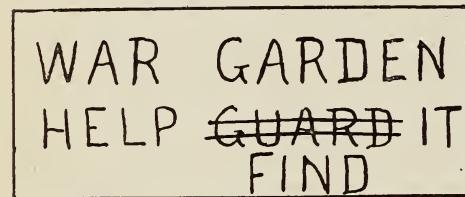
"HERE is a scientific fact. No living thing, either animal or vegetable, can live on sugar alone. The reason for this is that, while it contains carbon, hydrogen, and oxygen, it lacks the fourth most important ingredient of protoplasm, viz., nitrogen. Animals must derive their nitrogen ready built up for them into protein. There is protein in honey, doubtless in the proportion best suited to the bee."—*British Bee Journal*, 72. There's something to think over for you fellows who think it's smart to replace honey with sugar.

EDITOR TOWNSEND says, *Domestic Beekeeper*, 218. "It is our invariable experience that the colonies having an abundance of natural stores for winter and spring use are the colonies that produce our surplus honey. . . . Give us the colonies that have wintered and springed upon natural stores when it comes to rolling in the honey during the surplus flow." That man Townsend has a level head.

ARTHUR C. MILLER, your slogan, p. 600, is all right: "Don't extract the last drop and then feed sugar." You might add another reason why it's a losing game: sugar is entirely lacking in elements contained in honey that are necessary for the health and vigor of bees.

QUEENS should not be reared until natural swarming begins, as experience shows that queens reared after this time are better than those reared before.—*Schweiz. Bztg.* 240.

A few days ago the Puerden family took a rather extensive drive thru some of the residence streets of Cleveland, and so had a chance to observe a number of war gardens. There were many fine ones, and I did not wonder that vegetables were more plentiful, as well as cheaper and better than ever before known in the city. But there were other gardens, so-called, that made one long to change the signs like this:



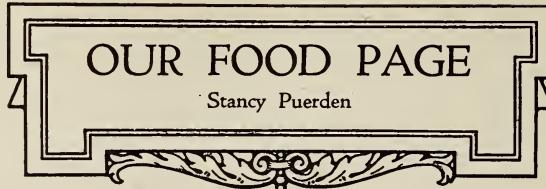
They were plantations of weeds with here and there a sickly vegetable trying to raise its head above the thrifty weeds. The enthusiasm of some people never lasts long, even in war times. I am hoping that every GLEANINGS reader with a piece of mother earth in his possession has the finest garden he ever had. I should love to take a peep at all your gardens and then another peep at your storeroom shelves and see how much of your surplus you have in cans.

Speaking of gardens, may I suggest that M.-A.-O. tell us something about his early potatoes. I understand there was some ceremony about digging his first potatoes (?), an invited audience of neighbors, or something of the sort. Mr. A. I. Root taught me how to start potatoes in a box of rich soil in the house, with the result that since early in July we have been enjoying the finest potatoes we ever had in the summer, so not all of his pupils come to grief.

I am expecting a polite note from the managing editor, suggesting that he did not engage me to conduct a gardening department; but you must admit, Mr. Editor, that gardens are rather closely related to the food question this year. It will be of no use for me to write recipes if there is nothing to cook.

HONEYED WORDS.

Have you noticed that the Food Administration has requested the railroads to serve honey and syrups as far as possible with breakfast cereals instead of cream and sugar. Dietitians tell us that to a certain extent carbohydrates may replace fats in



the diet, and we are urged to save fats wherever possible, as the fat shortage in the world is extremely serious. Here is a chance for us beekeepers (I never kept bees, nor do I expect to, but I have been a daughter of a beekeeper for more years than I would confess. I am the wife of a beekeeper and the mother of a small bee-keeper)—I repeat, here is a chance for us to do our bit by serving honey with cereals, on bread, and on all of these war breads and wheat substitute dishes. You will have little difficulty in persuading your children to eat more honey and less fat if your children are like mine. Children take to sweet like bees to basswood on a good honey day. Of course, you ought not to attempt to cut out all fat from the children's diet, but it can do no harm to suggest that they spread their bread very thinly with butter when honey is used; and at dinners where there is fat with the meat it is just as well for the family to use no butter at all.

To illustrate how children like honey, a few weeks ago a lady said to me, "How much honey do you allow your children to eat at a time?" I told her they generally ate as much as they wanted; that I believed appetite was a pretty safe guide in eating honey.

"Well," she returned, "James sometimes eats a whole section at a meal; and while it never seems to hurt him, I wondered if your children ate that much at a time."

I assured the lady that my children never ate that much at a time; and I privately wondered if James, who is a nine-year-old boy, wouldn't some time suffer the pangs of acute indigestion for his greediness. I was relating the incident to my family when my big boy said, "Why, mother, I absentmindedly ate a whole section of honey down to grandma's at lunch last Sunday evening, and I felt fine after it." However, in spite of these two incidents I do not believe a section of honey at a meal is the proper allowance for any one, even if he is a big boy with an appetite to correspond.

SOME OTHER SWEETS.

"Variety is the spice of life," so we must have a few jars of jelly, marmalades, and preserves in our pantries as well as plenty of honey of all sorts. Another reason is that jars of honey, home-made preserves, or jelly make the nicest little gifts to send the boys in training-camps. You see I do not

agree with the officer who was asked what the women could do for the boys in camp, and replied, "Leave them alone." A man is never too old to appreciate a little mothering, altho he may be slow to admit it, and many of the boys in the training-camps are so young.

In the limited space at my disposal I do not intend to give full directions for jelly-making, but just mention a few points which you may find helpful in these times of high prices. Jelly may be made very largely of water. Cover the fruit with water when you put it on to cook; and after cooking it long enough to soften so the juice will start easily, turn it into a jelly-bag and let it drip. Many articles on jelly making advise cooking the fruit with very little water, or even none at all. I made twenty-four jars of finely flavored jelly out of four scant quart boxes of currants this summer, and I did not squeeze the jelly-bag either. After picking over and washing the currants, not stemming them, I covered them with water, boiled them until they were soft, and then put them into the jelly-bag to drain. After dripping had stopped I put the fruit back into the kettle, again covered it with water, boiled it about thirty minutes slowly, and turned it into the bag again to drain. Altho I marked the jelly made from the second boiling as inferior, it did not seem to be, either in flavor or appearance. After a part of the juice has dripped thru the bag it is well to start making the jelly, for it is much easier to cook down a few glasses at a time than to boil down the whole amount. The old way was to boil the juice twenty minutes before adding an equal amount of hot sugar, measured before the juice had been reduced by boiling, and then boiling ten minutes more, or until it jellied. You will find you can make jelly of better quality by adding the heated sugar soon after the juice starts to boil. More time is given for the inversion of the sugar by the acids of the fruit, and there is less danger of crystallization. Also you may safely reduce the amount of sugar. Three quarters of a cup of sugar for every cup of juice is ample in most cases, unless you prefer a very sweet jelly. Cook the jelly rapidly, as long slow cooking tends to darken the product, and there is danger of destroying the pectin, the substance necessary for jelly-making.

One of the most reliable tests to determine when the jelly is sufficiently cooked is to take up a spoonful, cool it slightly, and then let it drip from the side of the spoon. If it leaves the spoon in several drops instead of one, or in a thin sheet, it will probably make a jelly of the desired firm-

ness. A little practice will enable you to get it just right. Skim it and pour it into hot sterilized glasses. Save the skimmings for the children to eat on their bread. They like it better than jelly itself. Cover the jelly when cold with melted paraffin, tipping the glass so that it comes up a little on the side.

Currants, crabapples, tart apples, oranges, and grapes are better suited to making a natural fruit jelly than others. Quinces are rich in pectin, but lacking in acid, and better jelly results if they are combined with apples or a small amount of lemon juice. Peaches, strawberries, and cherries are deficient in pectin, but jellies may be made from these fruits by combining with them fruits which are rich in pectin. Also by combining apples with more expensive fruits you may materially reduce the cost of your jelly without injuring its quality.

Here is a recipe for a rich conserve which is fine for sweet sandwiches, as a cake filling, or to spread between halves of lady fingers:

GRAPE CONSERVE.

Three pints grapes; 2 1/2 pints granulated sugar; 2 whole oranges ground, rejecting seeds; 1 cup English walnuts.

Pulp grapes and put pulp to cook until seeds are loosened, and then strain. Put skins and pulp together, add sugar and oranges ground fine, and boil about twenty-five minutes. Just before removing from the fire add broken nut meats and cook slightly. Pour into jelly-glasses and cover with melted paraffin when cool. Try this same conserve with peaches cut small instead of grapes, and for variety you may add half a cup of raisins cut small.

I always dreaded catchup-making until a friend gave me this recipe. The thickening shortens that last tedious hour of boiling when it is so apt to burn.

TOMATO CATCHUP.

Half a bushel tomatoes cooked and sifted; 8 onions chopped fine; 3 green sweet peppers chopped fine omitting seeds; 1 1/2 pounds brown sugar; 5 or 6 tablespoons salt; 1 teaspoon ground cinnamon; 1 teaspoon ground cloves; 1 teaspoon black pepper; 2 pints vinegar; 1/2 cup flour.

The onions and sweet peppers may be put thru a food-chopper, and, together with the sugar and most of the vinegar, should be added to the tomato pulp when it is partly cooked down. When nearly thick enough mix flour, spices, and salt with the rest of the vinegar, and use it to thicken the mixture. Cook until the flour is thoroly cooked, and, if not thick enough, add more flour in the same way. This makes a very smooth catchup.

IN Tryon, North Carolina, is a self-confessed "incurable sidelin'er" who finds this world "too full of fascinating things to do"—"and I cannot quite eliminate all but one." Finally, out of bees, greenhouse work, flower stores, vegetable-growing, and orcharding, things seem to have settled into a little market garden with bees as a side line. But this spring her four colonies cast seven swarms, which, of course, is altogether too—but wait. In Robbins, Tennessee, is one colony that cast three swarms, and one of these three cast three, so that this one colony has by natural swarming increased this season to seven. And this, as I was saying, is of course altogether too much swarming, if one is trying to secure a honey crop.

If increase is the one thing desired, and if these multiplied swarms grow to full-sized colonies, possessed of sufficient stores to winter on, well and good, but only if increase is the thing desired. Even then many beekeepers prefer to control swarming and to make their increase some more convenient way. Many allow the first (or prime) swarm to issue, but try to prevent after-swarms. Still others mean to permit none at all, preferring to keep the force of bees absolutely intact if possible. One of the bulletins issued by the extension department of this state begins, "A frequent cause of serious loss in the production of a honey crop is natural swarming. The general practice of beekeepers in Tennessee of allowing their colonies to swarm indiscriminately" (personally I seriously question its being a general practice) "is one of the common causes of a small return in surplus honey. While natural swarming cannot be entirely prevented, it can be reduced to a minimum, and the amount of the honey crop may be more than doubled by the methods of management here described."

* * *

Can you imagine anything more delightful than to drive along a good road near a pretty lake, and come upon a summer cottage with both honey and wild-strawberry jam for sale? Neither can I, except to live in the cottage by the lake and produce the honey and the jam! Doesn't that make a delightful way for schoolteachers to summer? "Richards and McCollum" is the business-like name under which two schoolteachers conduct this pleasant summer busi-

Beekeeping as a Side Line

Grace Allen

ness on the shore of Harvey's Lake, in Anderson, Pennsylvania. Thru three months' vacation they work with their fifteen colonies of bees, put their own hives together and paint them, gather wild strawberries, and make them into delicious jam. Then as one of them writes, "September 1st finds us with nerves quiet, health good, and a little cash." Practically ideal, isn't it?

* * *

Enthusiasm and energy are certainly contagious, especially when they go right out into the highways and the hedges and compel others to get energetic and enthusiastic too. Mr. R. W. Etheredge, of Selma, North Carolina, a fourteen-months beekeeper with twenty hives, who declares he studied, not merely read, GLEANINGS and A B C all the first summer and winter, says that whenever he sees any bees thru the country he goes right in and gets acquainted with their owner. Then if the man isn't a member of the association, he sends the name in to the state office, so getting him on a list to be approached for membership, and tries to get him to transfer his bees. This season he has thus persuaded three men to try movable frames, with the inevitable result of their being so pleased that they plan to transfer the rest of their hives in the spring. That's a case of one man doing his bit to advance the industry to the higher plane it deserves. I trust the meeting that was planned to be held in his yard was a success.

* * *

Mr. Clesson Merriman, of Leominster, Massachusetts, calls attention in an interesting letter to the great contrast between the methods of beekeeping fifty years ago, when bees were brimstoned to get the honey, and those practiced today, when progress is the watchword, and books and magazines and modern equipment make so different a business of beekeeping. But nearly as great is the contrast right today between different men. Take Leominster, as referred to in Mr. Merriman's letter. One man, owning five colonies, but no smoker or veil or other equipment, has his bees in old box hives with cracks big enough to accommodate mice, and a piece of blanket for a cover. Thus unprotected, they stand on the cold side of the barn, buried in snow in winter. They seem to live thru it all, how-

ever, and do him the kindness to fertilize his fruit-trees, but that is all. Indeed, what more could one expect?

Mr. Merriman, on the other hand, tho he says he is "getting along in years," makes sure in October that his colonies are strong in bees and stores, puts single winter cases over them on their summer stands, and keeps them snug and dry. Last year he carried off first premium on fifty sections of comb honey at the Worcester fair; second on the best ten sections, and first on one quart of pure honey vinegar three years old. Small wonder he thinks it pays to take care of the bees.

Leominster is a little new city, and Mr. Merriman writes that there are about 150 colonies of bees there, of which 25 are his. He has also the only extractor in town, home-made but satisfactory. Being a carpenter by trade, of course he is at a great advantage when it comes to being handy with tools.

Last summer he broke his right wrist, which kept him from his regular work the rest of the season, and also interfered seriously with his bee work. But on pleasant Saturdays he would take long tramps with a neighbor, hunting bees. They located six swarms, of which they destroyed one that they thought diseased, brought home four, and left one standing, to be taken later. The broken arm did not prevent such outdoor exercise—with the neighbor along to help—and it was fascinating work.

Some day I'm going bee-hunting myself.

* * *

Several comments have been made as to the continuous swarming in 1916. In spite of the disadvantages, illness, etc., under which we worked that summer, we held it down pretty well till the latter end of the season. Then not only did we have a few teentsey late swarms of our own, but we have also entertained strange swarms within our gates. One of them, an insignificant swarm of blacks from somewhere unknown, clustered one early morning on a peach-tree in the garden, then broke and clustered again on another peach-tree in the apiary; so we chuckle it into a box and set it off in a corner. Presently we set about introducing a few queens; and while one hive was open, quite suddenly we were surrounded by black bees. They were settling on the frames, down the sides of the hive, and all over my skirt and box-seat. Of course they were repulsed, and their queen lost in the fracas. Another time I found the top of one hive covered with an apparently peaceful settlement of blacks, quietly crawl-

ing down the front and into the entrance—at least they got that far, but there, of course, trouble began.

A few days after that, the firemen telephoned that there was a swarm right back of their hall, probably ours, as they came from our direction. As I was working in the yard at the time, I knew it was no swarm of ours; but as it was reported to be a good big one, I went over to investigate. In the alley back of the fire-hall, some one had thrown a tin can, not quite emptied of syrup, and that "swarm" was merely a jubilant neighborhood picnic in the alley!

* * *

I read recently of a man somewhere in the West who has 165 colonies of bees, producing \$1400 worth of honey in one season. Then I read further, "All work was performed mornings and evenings, with the co-operation of an industrious and sympathetic wife." Do you remember the story of how "me and Betsy killed the ba'ar"? Somehow I have a stubborn fancy that that industrious and sympathetic wife co-operates around these 165 colonies at some other times than just mornings and evenings. I have a further fancy that her name is quite likely Betsey.

* * *

It was Edward Everett Hale, I have read, who first declared that Noah had bees, too, along with his other side lines, and kept them in the ark-hives.

* * *

To Mr. John M. Davis,

Who presented me with a young Italian queen.

What did you give, when you gave to me
This beautiful queen, so graciously?

A life I could crush with a care'ess hand,
Yet no one at all can understand;
A mystery, shaped, thru world-old laws,
By the God behind the first great cause;
A life come down thru age on age—
Of countless lives the heritage;
A wee, slim creature with wonderful wings—
Such daintily gauzy and delicate things—
Her story a tale for poets to tell,
Woven of words with magical spell,
Romance and Beauty and Pride of Place;
One breathless flight thru bewildering space;
One princely mate, who wins—and dies—
Young and strong, in the sun-swept skies;
Within the hive, proud royal ways
Thru round on round of loyal days;
And cradled there in her shadowy room,
Lives in love with sun and bloom!

My thanks for the gift you gave to me
Of miracle, marvel, and mystery.

YEARS ago, when bees were kept in straw skeps, robbing time was the harvest time of the year, the bees being killed by the beekeeper and the honey "robbed" away from them. It is still common among box-hive beekeepers of today to hear about "robbing" the bees to get the honey.

There is nothing pleasant about this term (used now in another sense) for the modern beekeeper, however, for any beeman who has had just one experience with bees robbing each other looks back upon that experience with a feeling of thankfulness that it is over and a feeling of dread against a return.

Robbing, as understood now, is an act perpetrated by the bees themselves, and an act that is much easier to prevent than to stop after it gets started. Bees are creatures of habit, and once they get a taste of honey for which they have not worked they become as excited as some men do when they obtain money without rendering any just equivalent. In one sense robbing is like gambling—the longer it is kept up the wilder the participants become until, in some cases, madness results. It is true that robbing often starts innocently, but it does not take long for an uproar to develop. Bees tumbling into the hive, loaded not with nectar but with fully ripened honey, excite the other bees of the hive, which then rush out to get some of the stolen sweets. In time, if some weak colony is being robbed, the bees get to fighting furiously until they reach such a condition that they will sting everything and everybody in sight. It is this sort of fracas that will cure any beginner from being so careless as to allow robbing to get started. In many localities September is a time of danger, hence our decision to devote Lesson 8 to this subject.

When I was about ten years old, my father, who was working in the apiary, handed me a piece of comb honey that he cut off the side of the hive. While I was eating it a bee got on the under side and stung me on the lip. After that I didn't want the rest of the honey and I threw it away. I wondered at the time why father was so particular to have me go back and clean up that little piece of honey; but years afterward, when I carelessly left the door of the honey-house open, I knew the reason why.

Giving the bees a taste of ripe honey and getting them stirred up is only the begin-

ning of trouble; for once they get into the habit of robbing they may make life miserable for the beekeeper, sometimes for days afterward.

During extracting the utmost care is necessary, especially if the work is done at a time when no honey is coming in. When bees are busily engaged in gathering nectar from the flowers any quantity of honey might be left scattered all about the apiary and they would pay no attention to it. But it is this fact alone that so often gets the beginner into trouble, for he becomes careless during the honey-flow, and then some day when the honey is not "flowing" a repetition of former carelessness brings on double trouble. During a honey-flow the bees may be shaken and brushed from the combs without attracting robbers in the least; but during a honey dearth the work must be done very rapidly, the apiarist moving so quickly from hive to hive that the robbers can get no chance to pounce on any exposed honey. In extreme cases it is necessary to take the honey from a hive on one side of the apiary and then on the other, running back and forth from one side to the other so as to avoid staying very long in one place.

During a honey dearth it is much more pleasant, for the beginner at least, to free the combs from bees by means of the bee-escape. But here again caution is necessary; for if the cover does not fit bee-tight robbing will be started in the shortest possible time, for the robber bees from other hives very quickly find the leak and have the honey all to themselves, since the bees of the hive are trapped away and therefore unable to protect their stores. (The bees of the hive in question never rob from their own hive by entering above.) One should always be careful, therefore, in adjusting the bee-escape below the honey to see that the cover above is not warped. It is the height of foolishness to suppose that bees will not find an opening if there is one. They will not notice it when honey is coming in, but quickly find it at other times.

When extracting during a honey dearth it is important to see that all windows are screened. The door to the extracting-room should not be a screen door, otherwise there will always be a cloud of bees flying about it, and some of them will get in every time it is opened. The windows must be screened, but the door should be solid.

It always makes trouble to spill honey on

BEGINNERS' LESSONS

H. H. Root

LESSON NO. 8—ROBBING.

the floor, and it makes trouble going and coming to spill it on the floor of an extracting-room, especially if the building stands on piers or stakes so that the bees can get underneath. The honey leaks thru the floor, of course, and the bees find it instantly. This is why a room having a tight foundation is safer.

After the extracting is over the danger is not past; for during the process of drawing the honey off into cans, barrels, or bottles, there is always a chance for overflowing or for leaks. A large number of producers put their honey in 60-lb. cans, two cans to a case. In nailing on the covers to the cases, sometimes if one is not careful the nail will go in sidewise and puncture a can. Then when the cases are moved about the honey leaks out slowly and the bees find it if they have half a chance.

Barrels are far more likely to cause trouble, for the honey absorbs the moisture from the wooden staves, allowing these to shrink enough to let the honey leak out. A barrel that has held water should never be used for honey; even one that has been rinsed out is unsafe. To be on the safe side all barrels should be waxed thoroly. The best way to do this properly is to let the barrel stand in the hot sun until all parts are thoroly warm, then pour into it a few pounds of boiling-hot paraffine. The opening should be immediately plugged and the barrel rolled about for a few minutes so that the wax may be distributed over every part. The boiling-hot wax will increase the pressure of air inside so that the wax will be forced into all the cracks and crevices in the wood. Before it cools the plug must be withdrawn, and the surplus poured out.

After the honey has been safely barreled up the hoops must be driven down several times until they will go no further. A good tight barrel is one of the most satisfactory receptacles for shipping honey, but a leaky barrel is an abomination everywhere. Usually new barrels are the cheapest.

Another possible cause of robbing after the extracting has been done is the nearly dry cappings. When these have drained so long that no more honey will run out they may be put in a solar wax-extractor (a shallow box having a glass lid, and lined with black sheet iron). The heat of the sun melts the cappings and the liquid wax collects at the lower end in a suitable receptacle. Unless this box is tight the bees can get started on the honey that separates from the wax. Of course, it is necessary to protect all unmelted cappings from the bees. It is hardly safe to assume that no more honey will drain out, for slow dripping keeps up a long time.

The empty combs that are still wet are usually put back for the bees to clean out. Some stack the combs up, providing a small entrance at the bottom, and allow the bees to clean the honey out by slow robbing—that is, by going in and out thru a small entrance at the bottom of the stack. There are objections to this plan, however; for if one is not careful the robbing will be fast instead of slow. Furthermore, if there is any danger of disease, such as American foul brood, it might by this procedure be scattered all around thruout the apiary. A better way is to stack up the supers of wet combs over strong colonies to clean out. There is then no danger of starting wholesale robbing and much less danger of scattering disease.

Weak colonies often invite robbing, especially if they are well provided with honey and if their entrances are large. Prevention in this case also is the best method of cure. Weak colonies should have entrances no larger than are absolutely necessary. Sometimes, however, if bees get started robbing a weak colony, that colony should be placed temporarily in a dark cellar, and a hive containing one comb with a little honey in it put in its place with an entrance about the size of the entrance to the hive that formerly stood there. When the bees take all of the honey in this one comb, thus making a thoro job of it, they will quietly disperse. On the other hand, if nothing were furnished for them to work on they might, when thwarted in their desire to get the honey, go to other hives standing near, and the trouble be extended. If robbing has but just started, it can usually be controlled by contracting the entrance, throwing a bunch of hay or grass over the front of the hive that is being robbed and keeping this wet. Robber bees do not like to dodge thru such an obstruction for they cannot make their "quick get-away." If only one colony is doing the robbing, it sometimes pays to change places—putting the robbed colony in place of the one being robbed. When there is a general "row," contract the entrances to all weak colonies, see that there is no possible opening to exposed honey anywhere, then clear out, and let the bees alone.

Beginners often mistake young bees at play for robbers. Sometimes a large number of bees will be seen flying busily around the front of the hive so that there is a scene of great activity, while other hives are quiet. Closer investigation, however, shows the young bees merely at play. Under such circumstances there is entire absence of any fighting—no sneaking and darting around of the old, sleek, greasy-looking robber bees.

GLEANINGS FROM THE NORTH, SOUTH, EAST, AND WEST

I HAVE secured some grevalia honey this season that is almost pure of its kind, and as dark as any I have ever seen. The taste is anything but pleasant compared with our better varieties.

* * *

The melting down of colonies seems to be greater than we thought possible at first.

* * *

It is doubtful if there is sufficient white honey left in Southern California to supply the local markets until another crop is gathered.

* * *

The fact that the navel-orange crop is almost a total failure, due to the recent hot wave, will insure a very heavy bloom on the trees next season.

* * *

My wife is becoming quite an advocate of honey for canning fruit. She has used it this season with apricots and blackberries with great success.

* * *

A demonstrating lecturer at our local high school recently said that the refining of beet sugar had advanced to such an extent that there is now no chemical difference between it and cane sugar.

* * *

The majority of the honey shipped from this district went to London. The heavy increase on insurance, due to submarine activities, has had the effect of reducing the market price to some extent.

* * *

Ventilating colonies by raising the lids has created some doubts as to the desirability of this method of cooling the hive. Some argue that the raising of the cover only makes the work of the bees more arduous, in that it allows the hot air to circulate thru the hive in spite of the efforts of the bees, and that they are not able to keep the temperature down on that account. I am rather of the opinion that this may be correct when the temperature reaches 120 degrees in the shade.

* * *

The bottom-bar of the Hoffman frame is too weak for an extracting-frame. It should either be made thicker or as wide as the end-bars are at the bottom. The self-spacing shoulders are rather bothersome

IN CALIFORNIA

P. C. Chadwick, Redlands, Cal.

also, unless the combs are drawn to a great thickness. It seems to me now that I should prefer them as brood-frames only; but where the frames are interchanged it is almost impossible to keep them below.

* * *

It is very important, after requeening, to enter the winter with the greatest number of young bees possible. The future of the colony depends almost as much on a force of young bees to sustain early spring breeding as it does on sufficient stores to feed the young larvae. In this connection I am becoming more and more of an advocate of "autumn" equalizing in the spring. A young queen is the first factor, in that she pushes the breeding to the limit, but there are always some colonies in the yard that may be given brood to very great advantage the following spring; and with an abundance of young bees in the spring there need be no alarm felt about spring dwindling.

* * *

SHOULD BEEKEEPERS SELL BY CONTRACT?

I am going into the subject of selling by contract again. I am not posing as a "wise one," but there are so many beekeepers who have been caught this season that I think my argument will be more likely to find an open ear than on previous occasions. In the first place, it may be figured that when we contract our crop we are doing so at a price that seems safe as being a little higher than the general market will reach, so we are trying to get the advantage of the buyer. But the buyer knows daily what the trend of the market is, for that is his business, and he will not offer more than he feels safe in making good on, at a substantial profit; therefore he is trying to get the advantage of us. The average beekeeper's knowledge is so limited as to market conditions that it is not safe for him to contract at any price. It may be figured that the buyer is not going to contract at a figure any higher than the general market will bear at selling season, and one can almost always figure that a price offered by a buyer on contract will be sustained. In the face of this argument I can not but conclude that some one is going to be left, and it is more likely to be the producer than the buyer.

This season has been most peculiar in this respect. Contracting started as low as 6½ cents for white, and continued to advance

almost daily. A few contracted at that price, but, fortunately, not many. But as prices advanced, producers continued to contract, many agreeing to $7\frac{1}{2}$ cents. Our county organization set a price for its members of $9\frac{1}{2}$ cents. At the time this looked out of the question, but proved to be a very low figure after all. At 10 cents many sold. When $12\frac{1}{2}$ cents was reached a buyer became very indignant because I would not contract; but I told him I had no assurance that I would not be offered 13 cents the next day by another buyer; and as long as

the buyers continued to bid up I would not sell unless they wanted to take my crop at 15 cents. This price was not quite reached, but a small amount was as high as $14\frac{1}{2}$ cents. I am not blaming those who contracted, if in their judgment they were doing the right thing; and I fully realize that the man who seems to be the wise one, even in following the general market, may be classed as the fool another season. The weakness of the beekeepers seems to lie in their failure to maintain an adequate marketing information bureau.



THE twenty-first annual session of the Texas State

Beekeepers' Association, held on August 2 and 3, as an affiliated section of the Texas Farmers' Congress, at College Station, was, without doubt, the best meeting in the history of the organization. Considerable surprise was expressed that such a wonderful meeting could be held this year, the hardest in twenty-five years for beekeepers over most of the state. Much credit for such a successful meeting must be given to Mr. E. G. LeStourgeon, president of the association, for his untiring efforts to make the sessions this year of value to every beekeeper in the state.

Practically every beekeeping section of the state was represented—the north, the central, the east, the south, and the southwest. Only the extreme western section was without a representative. Fifty-seven beekeepers attended the session, and visitors were present to hear many of the papers.

The program, made out by T. P. Robinson, proved to be most interesting. Those on the program who were not able to attend the meeting sent their papers to be read. Beekeeping for beginners and for specialists was well discussed, altho there was some diversity of opinion, due largely to the differing views of what constitutes a specialist. Most of those present felt that those who desired to keep a few bees for home purposes should not be discouraged in such efforts; but it was generally agreed that but few are fitted to make beekeeping a specialty. There was some diversity of opinion as to the best location of apiaries, and really the section of the state may alter any set rule.

Bee diseases and their treatment were discussed fully. Again it was disclosed that there can be many minor changes in a gen-

IN TEXAS

F. B. Paddock, State Entomologist

eral plan, yet with equal success. There is yet a need for a

more technical discussion of bee diseases, for there is much misunderstanding as to how these diseases work. The foul-brood-eradication work was reviewed, and plans for future work were mentioned. At present the eradication forces are called upon to conduct educational work among the beekeepers. Mention has already been made in these columns of such work in two counties. The results in one county were mentioned at this meeting. When the eradication work was started in the county last spring it was estimated that there were 1000 box hives in the county. Today 350 of those have been transferred to modern hives, and the work continues to increase each day.

The papers and discussions brought out concerted opinion that the beekeeper could more profitably produce extracted than comb honey. Many regretted that local demand was for the comb honey, and all hoped it would not be long until the consumer would ask only for extracted honey. The problem of granulation has been a big factor in discouraging beekeepers from putting comb honey on the market.

Perhaps the most interesting topic of the meeting was "Shipping Bees by the Pound." This new phase of the industry has developed very rapidly in the state during the past season. Many beekeepers launched into the package business after it was evident that the honey-flow would be short in their locality. Some of these beekeepers had good success, while others lost considerable money. Not all of the failure of this business is due to the beekeeper, for the best of them lost heavily after it got real hot. A committee was appointed to confer with the express company with a view of reducing the loss of so many packages in

transit. It is expected that the express company will be willing to co-operate in any way possible.

The problems of the commercial queen-breeder were set forth in a very interesting manner. People are always ready to censure the queen-breeder in any way possible; but this topic brought out the fact that the queen-breeder has his troubles in trying to meet all the demands made upon him.

The accomplishments of the Texas Honey Producers' Association were discussed in a brief way. When the extremely adverse conditions are taken into consideration it is wonderful what has been done since the association was organized. This association is destined to a great future, which can be hastened only by the united support of all the beekeepers of the state.

* * *

Mr. Kenneth Hawkins, of Washington, D. C., was at College Station to assist in the Farmers' Short Course and attend the State Beekeepers' Association meeting. While here Mr. Hawkins addressed the state meeting of the county demonstration agents, in which he urged them to give beekeeping in their county due consideration as a possible source of profit to the farmer. He called attention to the work which has already been accomplished in the two counties where the agent is co-operating with the inspector to improve the industry in the

county. Before the beekeepers Mr. Hawkins spoke on the marketing of honey. This talk was very instructive to all, and enjoyed by each one in attendance. Previous to his arrival at College Station, Mr. Hawkins made visits to beekeepers in sections of the state that he was unable to reach in his visit to this state last spring.

* * *

W. H. Laws, of Beeville, Texas, has shipped a carload of bees to Wyoming, where he hopes to make a honey crop this year. Mr. Laws will return to this state in October. The same plan is being tried by B. M. Caraway, of Mathis, Texas, who has shipped a carload to Wyoming, and also by William Atchley, of Mathis, Texas, who has shipped a carload to Idaho.

* * *

It is stated upon good authority that Texas consumes $\frac{7}{8}$ of the honey produced in the state. With the constant heavy demand for honey from outside of the state it is hard to see how there will be an over-production of honey in Texas for some time to come. Low prices is usually given to prove that more bees are not needed. Poor marketing methods and unorganized effort has been responsible for low prices in the past. One large producer last year sold his entire crop of 23,000 pounds in 45 days without leaving home. Even at that the price raised after the supply was exhausted.



PROF. BALDWIN'S
cheery ad-
monition to

"keep the dish right side up," page 547, recalls the interesting experience of Mr. J. C. Parks, of Scottsboro, Alabama, last season. About the middle of July he extracted, got a very short crop, returned the supers, and went about his other work, much discouraged about the bees, but too busy with general farm duties to watch them. Imagine his surprise in October to find the supers "chock full" of sealed honey, with queens crowded down to a small patch of brood in brood-chambers! Truly while there's life, and storing room, there's hope.

* * *

We spent the latter part of July in Beersheba up in the mountains of Grundy County. You may be sure that, in addition to picnicking on overhanging cliffs, exploring wild gorges and dark hollows, daring the spray waterfalls, and following cool, allur-

THE DIXIE BEE

Grace Allen, Nashville, Tenn.

ing paths thru dense woods, we also visited a few beekeepers.

There were three right in Beersheba, on the mountain—Mrs. Arnold Hunerwadel, Mr. Morris Dykes, and Mr. Wm. Tate. The first two had their bees in modern hives, while Mr. Tate, who had a chance to purchase some old gums, and has had them only two years, has not yet made the change. However, he plans to invest in new hives this winter and transfer in the spring.

Mrs. Hunerwadel's apiary is an out-growth of the southern mountain yard established at that place in 1886 by Mr. Henry Funk, of Bloomington, Illinois. Mr. Funk instructed her in modern beekeeping, so that she could look after things in his absence, according to his directions. Then in 1888, it being no longer convenient for Mr. Funk to continue, he sold outright to Mrs. Hunerwadel, who, with her husband, has operated the business successfully ever

since. The average yield is about fifty pounds. At times she has had as many as eighty colonies; but four or five years ago a mysterious epidemic wiped out practically all the bees in that section, leaving her only one or two colonies. The trouble was with the adult bees, all of them deserting hives containing brood and honey—enough honey so that she sold several hundred pounds from these deserted hives. Since that disaster, disease or poisoning, or whatever it was, she has run along with a smaller yard—about twenty colonies.

Mrs. Hunerwadel says it gets pretty cold on the mountain, yet she winters on the summer stands with no protection, and has had practically no winter losses. The woods run right up to the attractive home. Scattered all thru these woods, on mountain top and side, is an abundance of locust, poplar, basswood, and sourwood, the chief sources of nectar. At the hotel "real country honey" was in great demand, that which was being served during our stay being mostly from poplar—dark, rich, a bit reddish, served in chunk, and mighty fine on hot biscuit or muffins. For steady diet, however (and we eat it pretty steadily ourselves), we prefer the lighter honeys—probably because that's what we're used to.

* * *

Mr. John M. Davis, of Spring Hill, and his son, Mr. Ben G. Davis, were the hosts of the 1917 Annual Field Meet of the Tennessee Beekeepers' Association, August 1. There were about forty present, and the day was packed full of pleasure and profit. The morning session was held on the lawn of the Davis home, under beautiful maple-trees. Mr. G. I. Matthews was chairman of the meeting. Mr. Porter G. Ward, a successful honey-producer of Allensville, Kentucky, gave an interesting talk on the honey and bee industry in Kentucky. Conditions in Maury County were discussed by Mr. Freeman. Mr. Yost, who has come to Tennessee to embark in commercial beekeeping, talked entertainingly on his experiences in Indiana. Mr. Henry Pointer, a prominent local fruit-grower, emphasized the mutual interests of the beekeeping and fruit-growing industries; and Mr. J. M. Buchanan answered and discussed various questions, relating chiefly to the effects of spraying and the part the honeybee plays in the spread of apple-blight—an insignificant part, Mr. Buchanan concluded.

The lunch was a delight—plates heaped with sandwiches, unlimited iced tea, and a sure-enough bumper crop of ice-cream cones—right in the middle of a hot day. Then after lunch Mrs. W. B. Romine, of Pulaski,

whose editor-husband is an ex-president of the association, and who is herself a talented writer, reader, and lecturer, delighted every one with a charming, informal talk, followed by several pleasing original short stories and poems.

Later we wandered out into the queen-yard, where so many thousands of three-band Italian queens have started their careers. Talk about bees! It didn't make a bit of difference where you stood, your skirts brushed against some entrance anyhow. But the bees were gentle and well-behaved. Indeed, Mr. Davis, announcing that he could demonstrate the gentleness of his bees in a way that his son could not do with his bees, brought a laugh by brushing them off a comb with his whiskers! And Mr. Ben cannot do that with his bees, because—he has no whiskers! We hived a naughty little nucleus playing truant in a tree, and captured and caged several queens as for shipment, while in the honey-house artificial cells were prepared for the edification of the visitors.

Then a goodly part of the crowd motored three or four miles over to the yard where Mr. Ben Davis raises golden queens. After admiring the attractive yard and the bright, beautiful bees, a little group still lingered to discuss the conditions of the honey market, deciding it was wise and practically necessary, in the face of a short crop and the increased cost of production and marketing, to advance the price over that of last year. We don't want to be greedy or unwise, but we do look for a dignified, suitable, and fairly substantial recompense for our labor.

* * *

There has not been time enough for many wintering reports and opinions to come in yet; but among the advance guard are two interesting ones, from North Carolina and Alabama respectively. Mr. Bruce Anderson, county agent for Forsythe County, North Carolina, who has been experimenting the past two seasons with different ways of wintering, says that to date he can see very little difference between the results from regular winter cases and the method shown in the picture—packed supers with hives wrapped in heavy paper. He himself is recommending the latter, the cases being "too unhandy and costly for most farmers." Yet he adds conservatively, "More experience is wanted yet, before any final conclusions are drawn."

Mr. J. C. Parks, of Scottsboro, Alabama, had referred in a previous letter to a drop of seventy degrees in three days, with the query, "Doesn't this show a great need of

winter packing in this climate?" Now he kindly writes about his first experiment with packing, made last winter. It was with packed supers and paper only, the paper being spread directly over the inner covers, and allowed to hang down to the bottom-boards, and securely fastened; over this were laid several folded fertilizer-sacks; next a super of leaves; and then the eight-inch telescope cover. The entrance was contracted, and protected from mice.

Mr. Parks summarizes as follows: "On the first day of April there were from three to six times as many bees issuing from the packed hives as from the unpacked. They stayed in the hives better in the winter, and were not out robbing and meddling with other colonies. The unpacked were robbing and nosing around, even when it was spitting snow." Not having extracted at the time of writing, he could not report as to the difference in yield.



AT this date, Aug. 7, the season so far as white

NOTES FROM CANADA

J. L. Byer, Markham, Ont.

honey is concerned can safely be considered over for this part of the country. Locally, at least, the crop has been very disappointing. After the abundance of rain that fell thru June and the first part of July, insuring a rank growth of clover, we all felt that warm weather was all that was needed to give us a crop. Then the heat came; and, altho the weather seemed ideal for nectar secretion, clover yielded very little. In our own five yards we have not a pound of honey that will grade as No. 1 clover, and the yield of the five yards varies from 30 to 50 pounds per colony. At the Simcoe County apiary things are better, but by no means have we a big crop—probably 75 pounds per colony. And all this is on the hives yet, for there is no buckwheat to force us to rush it off earlier. Honey there is flavored with sumac—the first of that flavor I have ever tasted in Ontario. I like the flavor very much myself, yet I have no idea how the public will take to something so unusual in this country. Basswood looked well also, but turned out in the same way as clover, and we did not get a whiff of the well-known odor when extracting. Buckwheat looks the best in years, and we are yet hoping for a crop from that source to balance up feed-bills and possibly leave a small margin as well.

DISAPPEARING DISEASE APPEARS.

We are asked to report if this "disappearing disease" or "Isle of Wight disease," as it is called in the old country, has ever shown up in our locality. Assuredly it visited us this year and killed thousands of bees just at a time when they were needed for the harvest. It made its appearance here late in June, when clover was just opening, and it was at its worst during the ten days in early July when we had dull cloudy weather or rain about every day. Each

morning the bees would pour out of the hives by hundreds; and

when once on the grass they would rush at full speed seemingly with a desire to get *somewhere*, but in a measure the movements were not altogether voluntary, for in yards that had any hollows in the ground, the ailing bees would gravitate there and die to such an extent that they would be piled two or three inches deep. They were not old worn-out bees by any means, for examination showed all to have perfect wings, altho they had no use for them. Many drones were also on the ground acting just the same but not traveling quite so fast. Italians were much more affected than dark bees; for while our home yard, which contains nearly all Italians, was badly affected, my neighbors' 90 colonies of mostly dark bees showed little of the ailment. As soon as settled warm weather came along with sunshine, the trouble ceased. But before this the colonies had been so depleted that supers formerly boiling over with bees then had but half or more of the combs occupied. Combs were simply jammed with brood at all times, and no brood troubles were noticeable at any time. The home yard and one at Markham, both mostly Italians, were the worst affected. The three other yards with more dark bees showed much less of the trouble. The big apiary in Simcoe County was in bad shape for but two or three days, and then the trouble disappeared. It is on a dry rocky location which may have made the difference. It certainly is a serious proposition when it hits as hard as it did this year; but, of course, with clover yielding but little the loss was not as great as it would have been had a good flow followed the attack. At this date, Aug. 7, colonies seem all right but not as populous by any means as they would have been if this great loss had not occurred. I have no idea as to what the

trouble was nor what caused it; but judging by the fact that it disappeared as soon as warm dry weather came, it looks as tho excessive and long-continued wet weather was responsible. Of course, Great Britain has lots of weather each year such as we have been describing, and naturally we at once thought of the dreaded Isle of Wight disease. Who can tell us for *sure* just what the trouble was and what caused it?

ARE WE NOT JUSTIFIED IN ASKING A GOOD PRICE?

I read with interest what my friend Holtermann says on page 594; and while I have no intention of "throwing stones" I should like to ask a question or two. Yet nevertheless while asking these questions I might as well admit that I sympathize with his attitude, for in common with Mr. H. we happen to hold some views that are looked upon by the world as *peculiar*, to say the least. In selling your honey at $\frac{1}{4}$ cent a pound more than last year, did you have any assurance that the purchaser would not cause the consumer to pay four or five cents a pound more than he paid last year? If such assurance was not given, all your good intentions are pretty sure to be nullified unless the purchaser is different in disposition from the ordinary run of people.

Money is the medium by which we trade, and for the beekeeper honey must be turned into money, which in turn is traded for the necessities of life. A few examples of the increased cost of living might not be out of order, altho I fear they are painfully common to all who work for a living and buy the things they need—a condition with which the majority of us are confronted.

Altho not heavy meat-eaters, yet our fam-

ily are not strict vegetarians. Yesterday I walked into the butcher's shop and was asked 45 cents per pound for bacon. Formerly we could buy it for about 15 cents. The baker called today and we handed him 66 cents for three loaves of bread. We used to get bread at 11 loaves for a dollar. Our family all wear shoes. We have to in winter, and they say it looks better in summer. From 50 to 100 per cent would be a safe estimate on advances in that line. We also wear clothes. Cold weather demands it in winter; and that social thing called civilization, whatever it may mean, demands that we wear *some* clothes all the time, whether weather be cold or hot. A suit that cost \$5.00 for one of my boys would now be about \$10; and when it comes to replenishing the family wardrobe, whether for boys, girls, or the old folks, about the same advances are noticed. Honestly I am up against a problem; for while I dislike to pay these high prices and dislike to see others pay them, how am I going to keep square with the world and pay honest obligations and still sell my product at anywhere near the old prices? As to the apple crop, it is almost a total failure in our county, and I have no idea where I could at present get the promise of even a barrel of good winter fruit.

Now, as a man with a large family to support, am I not justified, in view of the low purchasing value of the dollar and the great advance in all the aforesaid necessities of life, in asking more than $\frac{1}{4}$ cent a pound for honey above last year's prices? Seriously, we expect to ask and get more than that advance for the small crop we have, and at present we feel quite justified in so doing.

I never rains but it pours.

Figuratively speaking, all things seem to have combined to make our regrets more poignant this year down in our Florida. Orange honey a failure; scrub palmetto almost so. Mangrove yielding nothing, cabbage palmetto is blooming, but giving almost no honey. It seems that fall flowers must be our only source of nectar this year. Of course, at this writing (end of July) it is a bit too soon to prophesy for the partridge-pea districts, and yet that honey, wherever secured, is not a fine table honey. So it is pretty certain that Florida will furnish but little

FLORIDA SUNSHINE

E. G. Baldwin, Deland, Fla.

first-class table honey this season. And, to recur to our headline, our regrets are double because the prices just now are unusual. Bad enough to have no honey when prices are low. We could console ourselves by saying, "Oh, well! not much loss, anyhow." *But now!*

HONEY PRICES.

What few beemen have any honey to offer are securing from 10 to 11 cents now for it, often f. o. b. their own town stations; and word has reached me that dealers in the North are paying even 12½ cents per pound in some instances for good extracted

honey. Heretofore, the other commodities advanced in price, honey never seemed to feel the impetus, and stayed at about the same relative price as twenty years ago. But with the last two years there has come a change. Honey, for once, has advanced nearly apace with other similar commodities, and prices are now stiffer than ever before in the history of the industry; and with the close of the present war (and may that be soon!) prices will no doubt maintain a more nearly adequate and commensurate level, and stay at a price nearer the real value of honey. At least such is the hope and belief, too, of bee-men generally.

LATE BLOOM FROM THE ORANGE.

A correspondent from Sorrento, Fla., states, under date of July 20, that his bees were beginning to store honey in supers from the late bloom of orange-trees. He also says that rains are bringing out the late summer flowers, and is hopeful of a partial crop yet. Last year, after almost a total failure from orange, the trees began to blossom in June, and a fair crop of orange honey was obtained in many localities. This cheering news should be taken in close connection with the generally dark outlook for the state, and cause bee-men to take heart of hope and keep their dish right side up.

Nectar secretion is a vagarious and uncertain thing, depending on so many weather conditions unknown to man that the unexpected often happens. Victor Hugo says, "the unexpected always happens." A few years ago, on the southwest coast, after beekeepers had given up all thoughts of a crop that year, unless from fall flowers, a sudden flow from cabbage palmetto filled hives to overflowing, and many swarms in out-apiaries were lost owing to the bee-men not attending to them in time. Much honey, as well, was lost thru lack of super room. Never say die. Until the last sunflower waves its farewell to autumn in the swamps of southwestern Florida; not until the white asters bid the closing year adieu, can the apiarist be sure that he will not secure something of a honey crop.

THE BEST TIME TO REQUEEN.

A correspondent asks the best time to requeen. His query is for Florida, of course, and for Florida conditions. It depends on whether the beekeeper buys his queens or rears them himself. In general it is best to requeen (so our experience goes) during a honey-flow—any honey-flow that is of at least three weeks' duration. We usually rear our own queens, and do our

introducing of new blood during the flow from orange. But palmetto flows, or mangrove, or any good flow from partridge pea, or even sunflowers, will be a proper time for requeening. In sections where pennyroyal is abundant, new queens might well be introduced during the latter part of that flow; but it is least desirable as a season for requeening, owing to the prevailing cool weather during most of its bloom; for it begins in November and continues thru the winter. One correspondent near Tampa, however, declares that he can rear his queens successfully all thru the year. If one buys his queens he can often buy better queens, at lower prices, late in September, after bee-men in the North are done buying, and he can then requeen at little cost with fine stock. Of course, if one buys his new queens he can requeen at any time that a little honey, even, is coming in; but it is easier to rear during a steady and rather strong flow that will induce swarming conditions, even if not swarming itself. In short, put in new queens whenever you can get them, and can introduce them successfully. With the expert, who understands feeding judiciously, introduction can be successful almost any time.

FOUL BROOD IN FLORIDA.

So far no further foul brood seems to be making its appearance among the bees of the central and eastern portions of Florida. We warn the bee-men of those parts, however, that touches of the disease have been discovered, and unmistakable touches, too. They must be on their guard; and whenever they discover any dead brood, with brown, sunken, often pierced cappings, they must write to Dr. E. F. Phillips, of Washington, D. C., Bureau of Entomology, and ask him for proper packages in which to send him samples of their suspicious brood. Do not by any means ship any in the mails till the proper package has been sent post free from Washington. Like all contagious diseases, or many of them, at least, that are deadly and malignant in the North, foul brood is not so bad in warm climates; and we feel that it will never be the pest in Florida that it has been in some portions of the North; but only prompt and persistent vigilance can prevent loss.

We are glad to note the increasing tribute being paid to the fructifying visits of bees to the blossoms of fruit trees, etc. Here in Florida the same increase in paying tribute to the bee is noticeable. One of the largest colonization firms, operating on

the East Coast, has a daily paper, and in a recent issue we read with keen delight the following title: "The Bee and the Orchard." The article continued, "The bee is the fruitman's best friend." A large fertilizer firm in the state also issued articles

on the same subject. Thus the data are being spread, and fruitmen being better and better informed. What, a few years ago, was prejudice against is now prejudice in favor of the apiculturist. The beemen and the fruitmen can not join hands too closely.



THE honey market is still pretty strong, and will doubtless become stronger. AMONG THE ROCKIES

Wesley Foster, Boulder, Colorado

as 40 cents a pound for it. We used to get it for 15 to 20 cents. People who have an appetite for honey will pay for it the same price in proportion.

Fifteen cents a pound for extracted honey is not beyond the possible for producers to receive; and if we can only have brands enough of honey and all of them extensively advertised we can boost the consumption and price of honey at the same time.

THE INTER-MOUNTAIN HONEY-PRODUCERS' EXCHANGE.

Aug. 1 and 2 the beekeepers' conference on organization was held in Denver. Dr. E. F. Phillips, Mr. C. E. Bassett, and his assistant, Mr. O. B. Jessness, from Washington, were present to submit the plan of the Bureau of Markets for a central sales agency. Dr. Phillips spoke to the beekeepers on the evening of Aug. 1 upon the subject of wintering. This was one of the most valuable addresses to which beekeepers in this region had ever listened, and it was given at a time to convince. Mr. Bassett presented the plan he and his bureau had worked out. An organization was formed, and a committee of three upon draft of the plan was appointed.

This committee of three is empowered to make any change in the plan deemed necessary to make it workable and suitable for the beekeepers in this region. The plan will then be submitted to the executive committee for approval. There is a great deal of work ahead, but the obstacles can be overcome. We will have the assistance in presenting the plan of a number of organization men from the Bureau of Markets. The committee on final draft is W. H. Kerr, Herman Rauchfuss, Wesley Foster. The executive committee is composed of two Colorado men and one each from Utah, Idaho, Oregon, Washington, Montana, Wyoming, and Kansas. The names will be given later when the full list is available.

AND THE PRICE.

It has been a puzzle to me for some time why honey sells at such high prices in Europe. It did even before the war. But the turn events are now taking here will help to explain the puzzle, if puzzle it is at all.

Honey is used much more in cooking in Europe than has been the case in this country. Honey has been a more expensive article to produce there than here, and the consumers have had to pay a high price or go without. As a consequence they have paid the price.

Take the case of peanut-butter right now, which is a product comparable with honey to a certain extent. Peanut-butter of various brands is being largely advertised and sold. In our own family we are using some peanut-butter, and are paying as high

A. D. K., Minnesota.—The "Long Idea" hive of 20 to 25 frames has been spoken of very favorably in GLEANINGS from time to time. I am past 65, and cannot do heavy lifting. Would not such a hive be better for me than the regular standard hive necessitating the lifting of heavy bodies or supers off and on the hives? I simply cannot do any lifting, as I hurt my back some years ago, and yet I should like to produce extracted honey. Is there any real objection to the Long Idea hive, so called?

A. For your particular case the Long Idea hive would be better than the regular standard ten-frame that can be tiered up. It is very easy to give additional room in such a hive, because all that is necessary is to shove the division-board over and put in frames. The usual capacity of 25 frames is large enough for the average queen or colony.

Such a hive will not be blown over by high winds, and, furthermore, there is the advantage of wintering in a double-walled hive by contracting the brood-nest down to eight frames of bees and honey, and putting them into an eight-frame case without cover or bottom. This case should be set down lengthwise in the hive. When packing material is poured around the sides we have a double-walled hive ready for winter. The credit for this scheme of wintering belongs to J. E. Hand, Birmingham, Ohio.

Taking it all in all, the Long Idea hive for women, children, and old men, and others who cannot do heavy lifting, is ideal, provided extracted honey is the object. It is not suitable for the production of comb honey, altho sections can be put into wide frames, each frame holding eight sections.

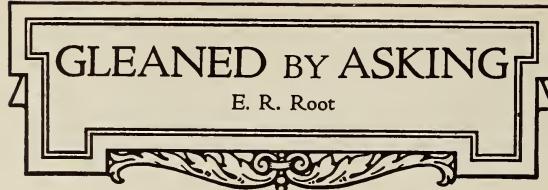
A. L. C., Vermont.—How large an entrance ought bees to have in the fall?

A. Ordinary summer entrances that are none too large at the height of the honey-flow should be contracted down from one-half to one-third their normal capacity. We usually use a slot about $\frac{1}{4}$ inch deep and 8 inches long for a strong colony. The same area in a square or round hole is not as good, as it will not keep out the field mice. In some localities these mice do considerable damage. When they nest in a hive they keep the colonies stirred up, and by spring every bee will be dead.

If it were possible to contract the entrance automatically during cold snaps, and enlarge it during warm spells, it would be advisable. It is best not to make the entrance too small, as it might clog up with dead bees, and a clogged entrance usually means the death of the colony.

T. N. G., Michigan.—What is the most satisfactory way to store combs?

A. If the moth-miller is not bad in the locality, empty combs may be taken off the colonies after the season is over and stored



up in hive-bodies or supers. These should be placed on the floor, and the tiers of supers covered in every case to prevent the entrance of moth-millers when the bees are away from the combs. Where moth-millers are prevalent it may be advisable to fumigate the combs first before putting away. This procedure will not be necessary in a cold climate unless the combs are stored three or four months before freezing weather sets in. Freezing will kill the millers and the worms, and probably the eggs. If the combs are not used the following summer after cold weather is over, they should be carefully examined from time to time, to see that the moth-miller does not get into them. Hundreds of good combs are often destroyed when they are not thoroly protected after a good freeze.

It is always advisable to keep any combs stored in supers so that neither bees nor the moth-miller can get at them. If left uncovered in a building one may find that his good extracting-combs are ruined by the moth-worm. There is no better asset in the bee world than good combs, especially if one is running for extracted honey.

W. N. V., Wisconsin.—Is it true that hybrid bees will gather more honey than either blacks or Italians in their purity?

A. Yes and no. Hybrids are surely superior to the average blacks, but not necessarily ahead of the pure Italians. Hybrids are so mean to handle that we much prefer a strain of pure yellow bees than to fuss with them. Just as good or better workers, by careful breeding, can be secured from the Italians than from hybrid stock. It is not an easy matter to have a hybrid queen duplicate herself, because her daughters will have a tendency to revert either to blacks or Italians.

W. F. E., Michigan.—Some of my colonies are hardly strong enough to go into winter. I have heard it said that when one or more nuclei in the same yard are united into one colony the old flying bees will go back to their old stand. Is this true?

A. Yes, to a great extent. It is usually advisable to unite in brood form. Hatching brood from a very strong colony can be given to a weak one; but uniting in brood form should be practiced usually in August, or at about the close of the honey harvest. If this has been neglected, your only recourse will be to unite the bees, brood and all. If the two hives are side by side, uniting can be done very easily by taking away one of the hives and putting all the bees and brood in the other hive. If there are three hives in a row, the bees and the brood should be put in the middle hive and the other two removed. Where hives are remote from each other in the same yard, bees

may be united; but the flying bees, or at least some of them, will go back. If a comb and empty hive are left on the old stand to catch these bees they can be carried back. After this has been practiced once or twice the bees will stay. In the case of blacks or hybrids the returning nuisance is not so great as with pure Italians; but usually smoke must be used to prevent them from fighting. With gentle bees such a procedure is unnecessary.

Where one has a series of yards, uniting can be practiced without bees going back to very good advantage by putting the weak colonies of one yard with the weak colonies of another yard. When uniting, it is always advisable to take away the inferior queen and cage the other. Where there is no choice of queens, let the bees fight it out. It sometimes happens that both queens are killed, but usually one will be left.

J. H. G., Tennessee.—I find in a good many of my combs considerable pollen. How can I get it out?

A. Don't get it out. Combs containing pollen in a colony of bees in the spring are worth as much as combs of stores. Indeed, there are times when we would give more for combs of pollen than for stores. The latter we can get by feeding; but the former cannot be secured artificially in a manner that is at all satisfactory. Rye meal, or cotton-seed meal in the absence of natural pollen, will do sometimes, but it by no means takes the place of the natural article.

To answer your question specifically, you can soak combs containing pollen in water for several days and then throw out considerable of the pollen with the extractor. But do not do it. Carefully preserve them in hive-bodies where the moth-miller cannot get at them.

I. S. B., Iowa.—How late in the fall can queens be mated?

A. As long as there are drones flying. In most localities drones will be killed off unless there are queenless colonies after the honey-flow. If there are drones, queens can be mated up till cold weather.

It is not advisable to depend on virgin queens mating in late fall—in your state, not later than Oct. 15. We do not believe that a late-mated queen is as good as one that is raised and mated earlier in the season.

S. W. B., Illinois.—Most of my colonies are two-story. They are quite strong. Shall I winter them this way in two stories, or shall I crowd them into one story for winter?

A. There has been quite a tendency of late to winter strong colonies in two stories. Sometimes the plan works, and sometimes it does not. The advantage of the two-story plan is that bees can go up into the upper hive and will then be a little further away from the chilling winds at the entrance. As a general rule, the strong colony by fall will reduce itself in size until it can occupy only one story. Where this is the case we would advise wintering in one story. The two-

story colony requires a large winter case of extra depth. If cellar wintering is practiced the two-story hives are heavy and awkward to handle.

Generally speaking we fare better with colonies in one story; but it is important to see that the colony has plenty of stores and covers when cold weather comes on, at least five or six frames.

Strange as it may seem, extra-strong colonies often do not winter quite as well as those of medium strength. One reason for this is that they consume their stores a little too early, with the result that they run short and sometimes starve in the spring. Starvation is one of the principal causes of winter or spring losses.

S. A. B., Pennsylvania.—My locality is very hilly—so hilly, indeed, that it is difficult to till the soil. I run a small fruit-farm and raise a little grain, and also keep about 50 colonies of bees, but the amount of bee-pasture is somewhat limited. Would you advise me to plant anything to increase the flow of honey?

A. Sweet clover is, perhaps, the best and most easily grown artificial pasturage that can be put out. The seed may not grow readily unless the soil has been inoculated. If you cannot find a place where sweet clover grows naturally, the bacteria can probably be obtained of your experiment station, or at least they will tell you where to get it. Otherwise some of the soil where the sweet clover grows should be gathered up and scattered over the fields or roadsides where you propose to grow it. After sweet clover once gets a foothold it can be grown readily. The next thing in the line of artificial pasturage is alsike clover along with white clover. The alsike would have to be grown on cultivated fields, and it would come in nicely with your other farming operations.

L. B. W., Massachusetts.—Somehow I manage to get stung a good many times in handling my bees. The stings swell on me, besides leaving a sore spot for two or three days afterward. Some bee-men tell me that they get but few stings. I wish you would tell me the secret of handling bees so as to get few or no stings.

A. Bees will sting worse at some seasons than at others. They will sting much worse toward evening and early in the morning than during the middle hours of the day. They may sting any one if he is an awkward bungler, and they may sting those who are very nervous and jerk their hands back, slapping and striking at the bees.

To avoid stings one must, first of all, select a favorable time during the middle hours of the day, and he must be very deliberate in his movements. He must have his smoker in good working order, and fuel burning well. It is not necessary to use a great amount of smoke, but a little at the right time and at the right place is better than volumes and volumes of smoke after the bees are enraged and on the warpath. If one is very timid he should wear gloves to begin on. After he becomes bolder he may cut off the ends of the fingers, for one

cannot do good work in gloves. He should wear a good veil, and have it securely fastened around the neck in such a way that it does not leave gaps between the shirt or coat and the edge of the veil. The directions sent out by the manufacturers explain how this is done.

With everything in readiness, and assuming that the operator has selected the hours of from 10 to 2 o'clock, with sun shining, atmosphere warm, he may now proceed. He should blow a little smoke in at the entrance—two or three short puffs. No matter how much smoke is used on top of the hive, if he does not use it at the entrance the breaking of the propolis at this time of the year may enrage the guards at the entrance, with the result that they may or may not make an onslaught on the bewildered operator. To keep back these guards and those near the entrance, two or three puffs of smoke in the entrance is a safeguard to the beginner, tho by no means essential to the expert who can avoid these snaps and bangs.

The next operation is to enter the hive-tool, screwdriver, or putty-knife, between the super cover and the hive proper. This tool should be thin enough so as to leave a gap of not more than an eighth of an inch. As soon as a gap of that width is made, blow a little smoke in; remove the tool and make another gap, and blow some smoke in there. If one has to be extra cautious, let him loosen the cover in this way clear around the hive. Every time he makes an opening of not more than an eighth of an inch he should blow in a little smoke. Now place the hive-tool between the hive and super-cover. Follow this up with smoke. Gently lift the lid, following it with more smoke. Each movement should be deliberate.

If the bees rush out, which they will do on an unfavorable day, do not jerk the hands back. Most of the bees' movements are mere bluffs; but if the hand is jerked back these bluffs may be turned into real action—stings.

If the bees appear quiet, the smoker can be set down; but we would advise holding the smoker in one hand and the hive-tool in the other. Gently loosen each frame. Next select a very thin comb—the thinnest in the lot. Very often this will be the outside frame. Make a gap between it and the other frames as wide as possible. Blow a little puff of smoke over the top. Gently lift the frame out, being careful about rolling the bees between the combs; for nothing will enrage bees more than to pinch or maim them when taking out the frame.

After the first frame is out, make plenty of room so any one of the combs can be removed without pinching a bee. After the hive is once opened up, there will be but little trouble; and all one needs to do then is to be careful about putting back the last frame. Make as wide a space as possible, and gently set it in place. The last thing of all is to take the hive-tools, if the frames are self-spacing, and shove them together,

for the bunch of frames must be centered in the hive. Never leave frames unequally spaced, for the result will be fat and lean combs. When next one comes around to lift the frames out he will be greeted with stings because one or more fat combs have filled up all the available space in the hive for removing a comb.

If one will practice deliberation in manipulating hives, always forming correct habits, he will find that he can accomplish more work by moving slowly than by rip-banging thru the hive. The beginner should select a time that is favorable for handling bees; for then he will discover he can get along without a sting, even when conditions are not right. We once worked a whole month without a single sting. The bees were gentle Italians and the weather favorable.

W. L. C., Missouri.—What makes my bees sting much worse in the fall than in the summer?

A. One reason for this is that in cooler weather the propolis will yield with a snap. In warm or hot weather it lets go by merely stretching. A snap or a bang to a hive, unless a large amount of smoke is used, makes many bees cross. Usually all necessary manipulations in the fall should take place in the middle hours of the day when the air is warm.

More propolis will be deposited in the fall than during the summer. Bees at such times have nothing to do, and will then gather an abundance of it. This abundance, together with its greater brittleness, and the cooler weather, make it more difficult to handle bees in the fall than in the summer.

J. R., Ohio.—Why do my bees hang out in front of the hive every night, in a great bunch, as they have done for a month past?

A. It is possible that your colony is very strong, and that it is impossible for all the colonies to get into the hives. Theremedy is to give more room if the season is not over, and also enlarge the entrance. If the colony is a very strong one it may be necessary to set the hive up on four $\frac{7}{8}$ -inch square blocks. Hives should be lifted off the bottom and the four blocks put under the four corners.

F. M. M., New York.—In outdoor wintering what kind of packing should be used?

A. Any material that is porous and cheap may be used. Wheat or oat chaff gives excellent results; but with modern thrashing these cannot be secured. Dry forest leaves when well packed down give good results. Planer shavings can be secured by the bale at any planing-mill, and they are cheap and serviceable. Ordinary sawdust from the sawmill is generally a little too dense and heavy. The same may be said of clover chaff. Mineral wool is good, but expensive. Ground cork is excellent, but in most localities it is not how obtainable. In the absence of any of the materials mentioned, straw, when closely packed, will be as good as anything. Hay would be just as good, but it is too expensive.

W. B. H., Connecticut.—Two of my yards are located on top of a knoll where the wind can strike them from all directions. I expect to winter outdoors in winter cases as recommended by the Bureau of Entomology. Would you advise moving the apiary to a more suitable location?

A. Yes, by all means. A yard of bees will often winter well in single-walled hives in a sheltered spot where another yard of bees in the best cases that were ever made, in an exposed location, will winter very poorly. We put sheltered location first, and winter packing second; but both, for outdoor wintering, are essential.

If you move the yard to a more sheltered place, wait till cold weather has set in, as you might lose many bees returning to the old stands; and you may lose some anyhow on the first fly-day. If you have a yard located in an exposed place, better move it three to five miles.

C. M. F., Massachusetts.—At the same price per pound, which would be the better feed for winter—extracted honey of inferior flavor and of dark color or granulated sugar syrup?

A. The first mentioned would be better for a spring feed; but on account of dysentery, as well as danger from disease, sugar syrup would be much safer. Where one can have positive information that the honey has been produced in a yard where there is no bee disease, and never has been, he can feed it provided the quality is sufficiently good. If the honey is of good quality, and free from disease, pound for pound it is superior to sugar syrup provided the price is the same.

G. L. B., Minnesota.—I have heard considerable about the merits of the big quadruple winter cases holding four hives to the case. How does the double-walled or chaff hive compare with these winter cases?

A. In extremely cold localities, where the mercury goes down to 20 or even 30 below zero, and stays there for weeks at a time, the big cases are probably safer than the individual double-walled hive. The ordinary double hive has only about two inches of packing space between the walls, while the winter case has not less than six inches around the sides exposed, and eight or ten inches on top. There can be no question but that, in a cold climate, either big winter cases or cellar wintering should be employed. Which should be used will depend a good deal on conditions. Where there is good drainage a cellar will probably give good results. See article in next issue.

E. L. B., Ohio.—I notice that there are no eggs or brood in my hives, and the queens look small. Should I requeen?

A. If there is no fall pasturage of any kind, and no stimulative feeding has been practiced, the average queen six months or a year old at the close of the honey harvest will let up on egg-laying, and may not lay any eggs at all. A young queen a month old will lay thru the late summer and fall.

Almost every fall we get orders for queens from beekeepers who say that they find no

brood or eggs in the hive, and conclude that the colony must be queenless. The fact is, when there is no fall flow the condition is a natural one. We usually consider it best to practice stimulative feeding if there is no fall pasturage in order to get out a force of young bees. A colony with old bees only may not winter well.

W. C. B., Minnesota.—Is it possible to extract honey from the combs without an extractor? I have only a few combs, and do not wish to go to the expense of buying a machine.

A. It is not very practicable. If combs containing honey are old and dark, and would not do to eat direct, you had better buy a small extractor or build one for yourself. A small honey-extractor is almost a necessity in any yard, even tho it be run exclusively for comb honey. There is a trade that wants honey in the liquid form; and it is well to be prepared to supply whatever is called for.

J. M. C., Vermont.—I notice that for stimulative purposes you recommend the use of a thin syrup—half sugar and half water. Could this be used for feeding up for winter?

A. Yes, but it would require too much hard work on the part of the bees to reduce it down to the proper consistency. In other words, it would exhaust the vitality of the bees too much. For winter feeding, use a syrup not weaker than two parts of sugar to one of water. If feeding has been delayed till late in the season, use $2\frac{1}{2}$ parts of sugar to one of water by weight or measure. The sugar in any case must be thoroly dissolved. For very late feeding a little vinegar, or, better, some honey, will prevent crystallization.

J. H. C., Rhode Island.—Years ago there were several reports of bad wintering on aster honey. I live near an aster swamp. Should I extract this aster honey if the bees gather it, and feed sugar syrup?

A. No. If the aster stores are sealed before the bees go into permanent winter quarters, they will prove to be perfectly safe; but if they are unsealed and somewhat thin, you may have considerable dysentery before spring.

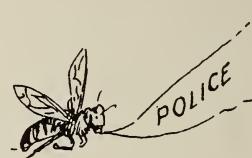
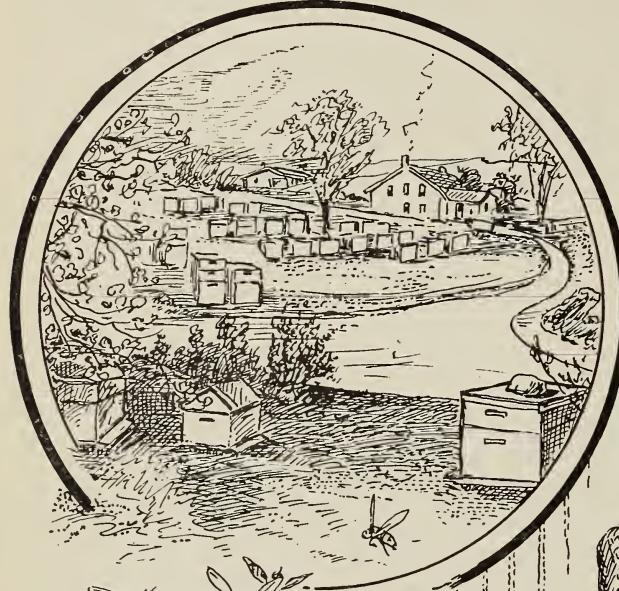
B. C. L., New York.—Do bees work on ripe fruit and spoil it?

A. Yes and no. They will not injure sound fruit; but if the fruit is overripe so that it bursts open, or if the skin has been punctured by birds or insects, bees will come in and join in the spoilation. They will then suck the juice out of the fruit until only the hard skin is left. Whether bees will attack broken or injured fruit will depend on the season. If they can gather honey from any of the natural sources they will ignore the fruit; but when no sweet is available they may attack any fruit with punctured skin.

In California during the fruit-drying season bees will sometimes be a nuisance in helping themselves to the juices of cut fruit while it is drying in the trays.

Mother Bee NURSERY RHYMES

By M.G.P. (Mother Goose Plagiarized)



There was a little bee

She had a little task,
So she flew straight out to the field,
field, field,
She sucked the nectar up
From every flower cup,
Flying back to the hive
with its yield, yield, yield.

She put it in a cell to let it ripen well,
And she bade her comrades to fan, fan, fan.
Then when the comb was done,
With cells filled every one,
That honey was stolen by a man, man, man!

HEADS OF GRAIN FROM DIFFERENT FIELDS

Lessons Learned in the School of Experience.

Late last winter L. E. Webb, of Morganton, talked to me so often about bees that I caught the fever. I purchased one colony of five-banded Italians. Soon after that I was taken to the hospital and underwent an operation for appendicitis. I had a very serious operation, and for three months was hardly able to walk out. Mr. Webb came down and hived a swarm for me, and a few weeks later the original colony swarmed again, clustering on the limb of a tree some twenty feet from the ground. I was still unable to help, so a neighbor cut the limb and the bees dropped to the ground, killing thousands of the bees. The rest arose, went to a little bush, and clustered again. We had the hive placed under the bush and knocked the bush with an ax. The bees fell and then took wing and left.

Soon after that the new colony swarmed and I decided to save them. I put on a veil that seemed bee-proof, walked into the swarm, shook the limb, and—ran. A neighbor told me to knock on the hive with a knife to charm the bees. Before I could do that some bees had found a way under the veil. There were hundreds on the outside, and these few inside. The physicians had told me not to run, owing to my condition, but I shamed a bee in speed. A few stings in the face and neck told the story. I was getting experience. I needed a better veil. I knew that, especially after the bees showed me the leaks in the old one.

On the Fourth of July I had my greatest celebration. I live on the lot adjoining the graded-school lot, and my bees observed the Fourth by swarming on a peach-tree near the school building. I hired a young fellow to hive the bees. He told me he was an expert

—he knew all about bees, how they worked, how they swarmed, how they traveled, how to manage them—in fact, everything about a honeybee. I put a small veil over my face and stood some fifty feet away to see the fun. This young fellow needed no veil—bees never stung him, he said. The bees were quiet on the peach limb, nine feet from the ground. The tree was small. The limb on which the bees were clustering was about the size of your finger. There was a peck—moving, shining in the sunshine—so gentle, they seemed! The hive was placed by the tree, and the young fellow, this expert, without veil, picked up a fence-rail, gave it a swing and hit the tree with all force. What happened? In four seconds the “expert” was making tracks down the hill, fairly flying. The bees never bothered him. They could not catch him. But they called on me. I quickly pulled down my veil, arranged it all around and thought I was all right; but a hole opened up and the bees streamed in. I ran at a dangerous speed; but when I reached the house more than fifty stings were in my chin, face, and on my bald head. I thought my time had come. I was ready to go out of the bee business. I decided to sell my bees at once, but the next day I changed my mind. I found that the fault was not with the bees but with me. I decided to try again.

The rainy season stopped the honey-flow, and the last of September I decided to feed all three of my colonies. About dark I made a syrup of sugar, put it in a dish, and arranged it before the super; but in my haste I left off the inner cover, and the outer cover left an opening about half an inch all around. I did not know this then. The next noon a neighbor told me robbers were after his bees. I went down to see, and you never



Mr. Abbott's out-apiary at Palms, Mich.


 HEADS OF GRAIN FROM DIFFERENT FIELDS

saw such a stir among half a dozen colonies. I decided to see about mine, and, to my surprise, this neighbor's bees were making war on my colony, and nearly a gallon of dead soldiers lay before the hive. It was a battle royal. The guards watched the entrance, but they could not watch the top. I saw my mistake, and am entering my next season a wiser beeman and with greater hope.

Morganton, N. C.

A. C. Kerley.

Liquefying Candied Honey That is in Large Vats or Tanks.

Last autumn extracted honey was selling for only a fair price; in fact, the sales were rather dull. The most of my crop was put up in five-gallon tin cans, but 600 pounds was in a galvanized iron tank. I was not in a hurry to sell, for something seemed to tell me that extracted honey could not go much lower, while there was a fair chance for an advance later on. Every one who has read "Gleanings" and watched the market knows how extracted honey has advanced in price.

When the time came to sell to advantage the honey in the five-gallon cans was partially candied. This I sold in March. The man who purchased it reminded me of the granulating, and, while he did not deduct anything from the price he offered, he intimated that he might have done somewhat better had the honey been in the liquid

state. He said he would have to liquefy it.

The 600-pound tank was mounted on a stand 18 inches high with the center cut out some 12 inches square. For two days I placed a coal-oil stove (two four-inch wicks) underneath, but this was making slow progress in zero weather. I then set up a cook stove in the honey-house, and put a large galvanized tub on it. A tub about five inches smaller in diameter was placed inside, supported by some bent pieces of scrap iron to keep it one inch from the bottom of the first tub. Water was poured in between, and a fire started. I then started to fill the inner tub by scooping the honey from the top of the tank with a grocer's scoop. The honey was candied hard, and any beekeeper who has had any experience along this line knows what that meant.

After so long a time the coal-oil stove, the quite feeble compared to its task, began to get in its work; and by ramming a stick thru the honey-gate in the tank I coaxed the honey to flow slowly into a pail. I could now scoop out at the top and also draw off below. I had a nigger's coon-trap—"I catched 'em a-goin' and a-comin'." I kept a slow fire under the tub, but I never let the water get any hotter than I could bear my hand in. I believe this is a fair test in the absence of a thermometer. It is better to take a little more time to liquefy honey than to ruin the flavor.



A mighty fine sweet clover field owned by Frank L. Abbott, Palms, Mich.

HEADS OF GRAIN FROM DIFFERENT FIELDS

I know this is a crude arrangement, and my object in writing this is to draw out the modus operandi of some fellow who knows a better way.

Each year when I receive a new catalog I look thru it to see if I can not find some kind of apparatus for liquefying honey, but it is never there. What I want is something that is not too expensive nor too complicated —something that requires neither an electrician nor a civil engineer to operate, and something that will do the work without my help nights to keep its feet warm.

When candied honey is reduced to the liquid state a slight scum will rise. It is best to skim this off and use it for bee food; for if put into the cans without skimming this foam will rise to the top and give a bad appearance.

By all means we should put our honey on the market in the best possible shape. It will not only help us to get a better price, but will also help our brother beekeepers. A poor quality of honey on the market runs down the price of all honey; a fine quality brings the price up.

S. E. Miller.

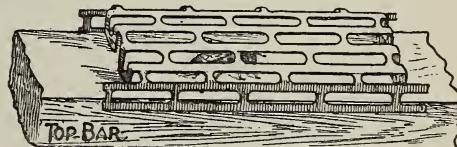
Rhineland, Mo.

The Rearing of Queens in an Out-Apiary.

In the morning, get an empty box with a loose bottom, and a little water. See that the cell cups are all ready, and go to a colony that is pretty strong. If the bees are in the super, all the better. Take out three frames of sealed brood along with the adhering bees, and put them in the empty box; also a frame of honey if the other frames contain none. Then shake two frames of bees off from the combs that have unsealed brood. Space the frames about an inch apart; sprinkle them with the water, and cover, being sure the queen is left in the old hive. Remove the mother colony to a little distance and put in its place the divided portion. About half an hour after graft the cells and insert them between the spaces previously made. Be careful not to use too much smoke. Lift the cover gently to avoid exciting the bees which will be hanging in the spaces. In the evening take out the frames with the grafted cells and brood along with the bees and put them in the super of the mother colony after replacing it in its old position; or lift the hive with the cells and brood; place it on top, with a honey-board between. If a general requeening is intended, more than one lot can be grafted. Start killing on the fifth and continue until the ninth day if the apiary is large. After grafting count the cells. If not sufficient, graft some more.

On the tenth day put cells in protectors. For keeping them warm, tack wire cloth on the bottom of a super and put it on top of a

strong colony, and cover; then inclose the cells in protectors and place them in the super, using as fast as needed. If at home, the cells can stay until next morning before transferring to the queenless swarms. The cells are then distributed in the middle of the brood-nest, between the sealed brood of the queenless colonies, so as to avoid chilling. In about twelve days after giving the cells, the queens should be laying. It's not necessary to use royal jelly if the larvae are well fed. I have had better results without the jelly, and very few failures if the larvae are put in carefully. If no honey is coming in, feed the cell-building colony with a slow feeder.



A HANDY QUEEN-CAGE.

To use this queen-cage, place it on a top-bar of a frame; raise one end about half an inch and put the queen under. It is used mostly during swarming time, when the cells are destroyed and the queen caged for ten days.

Medina, O.

J. E. Thompson.

After Removing Brood, When Can the Bees Start in the Supers?

If one frame of sealed brood is removed from a colony having five brood, I should like to know how long it would take the colony to be in condition for gathering. I ask this in order to know when I should draw from the strong and when I should not. To illustrate: Suppose my best colonies have reached the stage of "five brood;" but, perhaps, owing to a poor spring or poor wintering, they need all the remaining time to get into condition for surplus. How much time will it need? and how much more time after removing one brood to bring it into the proper condition, all things being favorable?

J. H. Fisbeck.

St. Louis, Mo.

Dr. Miller replies:

Upon first thought your question seemed a stumper; but upon studying it over it doesn't seem so hard. Evidently you have in mind that when brood is drawn from a colony that colony must have a certain time to recover before it is fit to do super-work. It is true that taking brood or bees from a colony diminishes its force of storers. Of course, there might be a case when taking away two or three frames of brood would make the difference between swarming and not swarming, thus

HEADS OF GRAIN FROM DIFFERENT FIELDS

increasing the surplus; but as a general proposition every brood or bee taken from a colony means at least a little less surplus from that colony.

But from this it does not necessarily follow that taking away from a colony all but four of its brood incapacitates it entirely from storing surplus. Think a minute; when a colony sends out a natural swarm, it's not the mother colony, with all the brood, from which you expect a harvest, but from the broodless swarm. When you shake (or brush) a swarm you take away all the brood, but you expect the broodless bees to go right on storing, without waiting to build up. So when you take away from a good colony all but four of its brood, it is still left fit to do super-work. You have taken away none of its field-force; they will return. If

it has more than four brood, it is already strong enough to store surplus, if its bees have any get-up-and-go to them, and reducing to four will not knock it out.

So the answer to your question is that it is never too late to draw brood so long as you can thereby fit another colony to do super-work, even if it be in the middle of the harvest.



The Paper Bottles

I used the sanitary paper bottle for two years, and liked it very well. To overcome the leakage around the covers I sealed them with boiling-hot paraffin wax—a plan that gave good satisfaction.

J. Stuart Seofield.

Kirkwood, N. Y.



THE BACK-LOT BUZZER

BY J. H. DONAHEY.

Miss Nettie Sweetiemouf is such a stickler for precision since she bought her new A B C on bee culture, that when her beau calls her honey she makes him specify whether he means golden rod, buckwheat, bass wood, or clover.

CHAS. A. REESE, Assistant Entomologist in charge of apiculture, Charleston, W. Va., is laboring earnestly to rouse the possible beekeepers of his state to the opportunities in apiculture. He is sending out circulars appealing to West Virginia beekeepers to keep more bees and to use modern equipment. There are some wonderful opportunities in apiculture in West Virginia, and Mr. Reese is on the track of the mountaineers, preaching the gospel of good beekeeping. It will be news (if not a surprise) to most beekeepers of the country to know that West Virginia has a larger appropriation than any other three states for carrying out the provisions of the state bee law. The legislators have not been wanting in their duty to promote the bee industry. Mr. Reese would very much like to promote a West Virginia beekeepers' and honey-producers' association. Such an organization could be of great use and value to the beekeeping interests of the state, and every West Virginia beekeeper should lend his aid to Mr. Reese's efforts in this direction.

The beekeepers of British Columbia held a field day and convention at the Vancouver Exposition on Aug. 24. Special prizes were offered for exhibits of large quantities of honey as an incentive to greater production. The experimental apiary inaugurated by the Beekeepers' Association of British Columbia at Hastings Park was used for demonstration purposes during the week of the exhibition. The meeting of beekeepers especially discussed the difficulties of beekeeping in British Columbia, which are many, owing to the peculiar climatic conditions. Mr. Williams Hugh, of Cloverdale, B. C., is the enthusiastic and hard-working secretary-treasurer of the association. His hard and earnest work certainly ought to bear fruit in the great Rocky Mountain province of Canada.

The Queensland *Apicultural Journal*, published by the Queensland Beekeepers' Association, at Frisbee, is now a year old. The honorary editor, popularly elected, is the president of the association, Mr. H. L. Jones, and the secretary is Mr. E. M. Tarte. The association has a membership of 250, and Queensland has nearly 1500 practical apiarists. Mr. Tarte, the secretary, writes GLEANINGS that the chief purpose of their



journal is to encourage co-operation and organization. He adds that Queensland has the largest and most energetic association in Australia, and

is just about to establish a co-operative honey company on some such lines as those of the Colorado Honey Producers' Association.

Mr. Francis Danzenbaker, known as the inventor of the Danzenbaker hive, Danzenbaker section, and Danzenbaker smoker, died at Richmond, Va., on July 24, at the age of 80 years. Mr. Danzenbaker introduced to the beekeeping world the lock-cornered principle on hives—something that has been adopted by practically every beehive manufacturer in the United States. The Danzenbaker section and super are still used to a large extent. He also invented the smoker bearing his name; but as this was on the cold-blast principle it never had a very large sale. Likewise his hive, on account of the unpopularity of closed-end frames, is going out of use also. Mr. Danzenbaker was still keeping bees, and was a frequent exhibitor at various state fairs, showing his hives, honey, and bee-smoker.

Here is the program of the Ohio State Beekeepers' Association to be held Sept. 6 and 7 at Wilmington: Thursday, Sept. 6, 10:30 a. m.—Prayer, Rev. J. J. Richards; Minutes of Medina Meeting, Ernest Kohn, Grover Hill; President's Address, Melville Hayes, Wilmington; "Educational Value of Inspection Work," A. C. Ames, Weston; Appointment of Committees. 1:30 p. m.—"Cuban Bee Industry," D. H. Morris, Springfield; "Queen-rearing," J. P. Moore, Morgan, Ky.; Fred Leininger, Delphos, O., and Mel Pritchard, Medina; general discussion. Thursday evening session, 7:30 p. m.—"Prevention of Swarming," C. P. Dadant, Hamilton, Ill.; "What Ohio University is Doing for Beekeeping," Jas. S. Hine, Columbus; "Successful Beekeeping," E. R. Root. Friday, Sept. 7, 9:30 a. m.—Meet at Walker Memorial building for automobile ride over Clinton County, under auspices of Wilmington Commercial Club. Afternoon session at opera-house at 1:30.—"Mother Goose's Melodies" (paraphrased). Mrs. G. P. Phillips, Washington, D. C.; "Flowers" (pollenization and cross pollenization), E. R. Root, Medina. (This meeting will be attended by pupils of Wilming-

ton public schools under charge of Prof. E. P. West, superintendent, and by the ladies of Wilmington.) Friday evening session, 7:30.—“Wintering,” Dr. E. F. Phillips, of Bureau of Entomology, Washington, D. C.; Question Box, E. R. Root, Medina.

* * *

Prof. E. R. King, of the New York State College of Agriculture at Cornell University, is author of the Cornell Extension Bulletin on “How to Increase the Honey Supply.” This is an excellent bulletin. In it he estimates the actual number of colonies in New York State to be more than 300,000.

* * *

At the Virginia State Farmers’ Institute, held at Blacksburg on Aug. 16, the Virginia Beekeepers’ Association was organized, with the following officers: President, T. P. Asher, Brookneal; vice-president, Mr. Coche, Danville; secretary, Prof. W. J. Schoene, Blacksburg. These officers and Dr. W. H. Donigan, of Gratzton, and E. C. Spane, of Church Road, constitute the executive committee. There was much enthusiasm shown at the organization. Geo. S. DeMuth, of the Bureau of Entomology, Washington, D. C., was present to demonstrate.

* * *

The committee of the Western New York Honey Producers’ Association on Aug. 11 recommended that beekeepers sell their 1917 crop of honey for not less than the following prices: White extracted—60-lb. 5-gal. can wholesale, 14c to 15c per lb., and retail, \$10 per can; 10-lb. pail wholesale, \$16.75 per doz., and retail, \$1.75 per pail; 5-lb. pail wholesale, \$9.00 per doz., and retail, \$1.00 per pail; 1-qt. jars, \$6.00 per doz., and retail, 65c a jar; 1-pt. jars wholesale, \$3.25 per doz., and retail 35c per jar; 1-lb. jars wholesale, \$2.40 per doz., and retail, 25c per jar; 6-oz. jars wholesale \$1.15 per doz., and retail, 13c each or 2 for 25c; bulk (no packages), 16c; amber or dark honey, 1 to 2c per lb. less. Comb honey—fancy white, \$4.50 per 24 sections, 25c per section; No. 1 white, \$4.25 per 24 sections; 25c per section; No. 2 white, \$3.75 per 24 sections, 20c per section.

* * *

The Division of Farm Publications of the Department of Agriculture at Washington sends out the following under the headline, “Bee Kultur for the Kaiser:” “Because so much alfalfa was winter-killed in the Middle West the government has been urging the farmers to try out Grimm alfalfa in that section. GLEANINGS IN BEE CULTURE sug-

gests that alfalfa-growers who suffered from winter-killing put in sweet clover, stating that their excuse for butting in on government advice is because sweet clover is a great honey-plant. All right, GLEANINGS, we are for ‘most anything that will make the busy bee sting the Kaiser harder.’”

* * *

The Department of Agriculture of Ohio in its report on the condition of crops of date of August 1 estimates that the apple crop of Ohio will be less than half a normal crop. Its estimate of the honey crop is 57 per cent of a normal crop, and only 54 per cent of last year’s crop. Even if it were not for the under-production of honey this year, it is said on the authority of good bee-men that honey prices are always higher when the apple crop is short. There do not seem to be many factors lacking to boost the price of honey this year.

* * *

Mr. L. W. Randall, writing from Norwood, South Australia, says that beekeeping in that country is still in its infancy, altho there are about 30,000 colonies in that state. The climate is very similar to that of California, and the main source of the honey-flow is eucalyptus. The winters are extremely mild. Three months of the year are cold and wet; but even during that period there are bright sunny days which allow the bees to have a good cleansing flight. South Australia, as Mr. Randall says, seems to be an ideal place for beekeeping.

* * *

The all-day summer meeting of the Pennsylvania Beekeepers’ Association held at the apiary of L. K. Hostetter, near Lancaster, on Aug. 16, proved a great success. It was the largest field meeting this association has ever held, about 125 persons being present. Prof. H. A. Surface (former state economic zoologist) and wife were present and took part in the program. The Hostetter families extended most generous hospitality to the beekeepers present. The annual meeting of the State Association will be held at Lancaster next January.

* * *

Our readers in Western Ohio, Western New York, and Indiana will be saddened to learn of the very sudden death of G. A. Offineer on Aug. 12. For some years he has acted as honey-buyer for The A. I. Root Co. in the localities mentioned. It will be hard to replace him, as he had in an unusual degree the confidence of both his employers and the beekeepers, realizing that their interests were identical. We shall miss him

as a friend and as a loyal, efficient worker for the best interests of the beekeeping world.

* * *

More than fifty beekeepers attended the annual field meeting of the Chicago Northwestern Beekeepers' Association held Aug. 14 at the home apiary of the president of the association, Mr. E. S. Miller, Valparaiso, Ind. Talks were made as follows: C. P. Dadant on swarm prevention; D. W. Erbaugh on bee diseases and treatment; John C. Bull on crop prospects and prices for this crop; E. S. Miller on wintering and overstocking. As to honey prices, the association recommended that comb-honey wholesale price be 18 cents and retail price 25; extracted, wholesale, 15 cents, and retail 25.

* * *

Twenty-five new members joined the Polk County (Iowa) Beekeepers' Association at yearly meeting held on Aug. 4. Dr. C. L. Wright was re-elected president, and Mrs. E. C. Scranton, secretary and treasurer. The meeting took a patriotic turn. Among other evidences of this was the omission of the customary picnic dinner, and giving the amount of its usual cost to the Red Cross. Among those who addressed the meeting were: Mr. R. H. Faxon, secretary of the Des Moines Chamber of Commerce; Mr. J. W. Jarnagin, editor of the *Iowa Farmer*; Mr. B. T. Bleasdale, president of the Iowa State Beekeepers' Association; Prof. Atkins, of the State Experimental Station at Ames; Dr. Bonney, of Buck Grove, and Mr. C. P. MacKinnon.

* * *

The New Jersey Beekeepers' Association was to hold a special field meeting with demonstration on Aug. 30 at the apiary of E. G. Carr, New Egypt, N. J. This enterprising association will hold a hive-product show at the Trenton Interstate Fair, Sept. 24 to 28. Generous premiums are offered for exhibits made at this show. Address the secretary, E. G. Carr, New Egypt, N. J., for further particulars.

* * *

BEEKEEPERS' MEETINGS.

The editor attended a series of field meets in the eastern states within the last few days. As little time remains before going to press we can give only the briefest mention.

At Reynoldsville, Pa., we met an enthusiastic crowd of beekeepers with their wives, at the residence of A. M. Applegate, on Aug. 1. This home is nicely located on a hill that overlooks the town. Generally, the

season thruout Pennsylvania has been unsatisfactory, the crops being short; but the prospects were favorable for sumac and prickly ash. Chief Inspector Geo. H. Rea drew out the fact that bee disease, both European and American, had wiped out a good many small yards thruout the state. There were not half as many bees as were formerly kept; but inspection was now under way, and he hoped the disease would be brought under control.

The next field meet we attended was under the auspices of the New York State Association of Beekeepers' Societies, held at the residence of S. D. House, Camillus, N. Y., Aug. 3. The general reports from over the state showed a shortage in the crop over that of last year. Some beekeepers reported only 25 per cent, others 50, while some thought they would have a full crop, as basswood was well on. There were plenty of field demonstrations, and on that day Mr. House had something like five or six swarms. As they went out and clustered on the trees he said, "Let 'em go; I'll get 'em later." Buyers had been thru the state, but the beekeepers were holding off to see what the market was going to be.

On Aug. 4 we attended a field meet at the Rhode Island State College grounds. While the attendance was not large, the meeting was enthusiastic. Such men as Arthur C. Miller and Allen Latham were present. Of the visit we had at the apiaries of both, we shall have something to say later.

The intervening days, 6, 7, and 8, we spent in New York and New Jersey investigating the honey situation. A report of this is given elsewhere editorially.

On Aug. 9 we attended an enthusiastic field meet of the Connecticut Beekeepers' Association at the Connecticut Agricultural College, Storrs, Conn. A large crowd was present, and the association seemed to be very much alive. Some interesting addresses were given during the afternoon of the 9th, when some field demonstrations were given.

On Aug. 10 we attended a field meet of the Worcester County Beekeepers' Association held at the apiary of Clesson Merriman, at Leominster. The attendance was large for a county meeting.

The last field meet was under the auspices of the Massachusetts Society of Beekeepers, held at Agricultural College, Hawthorne, Aug. 11. The following speakers were represented on the program: Arthur C. Miller, O. S. Fuller, Charles Stewart, Wilfred Wheeler, F. A. Smith, and E. R. Root. The attendance was good, and enthusiasm the best.

WHILE I write on this 7th day of August the whole wide world more or less is talking war. Just about a year ago there were three Home papers in which we discussed more or less "war on Christian principles." Just after these talks quite a few of our old and good friends wrote me that they were surprised to see the author of the Home papers *justifying* war. You may recall that I gave as an illustration the Morgan raid that occurred here in Ohio in 1863. Let me repeat the circumstances.

This band of raiders without the authority of the Southern Confederacy crossed the Ohio River, came into Ohio, robbed banks and looted stores, and for a time our Ohio people seemed to feel themselves helpless. They helped themselves to everything they wanted. But whatever God's holy book may have to say in regard to this matter of *war*, our men and boys here in Ohio decided among themselves that under the circumstances war, and bloody war, was the *Christian thing* to do. They armed themselves with guns, pistols, and, if I am not mistaken, some of them had only hatchets and axes. They eventually surrounded the Morgan gang and took them prisoners, and succeeded in enforcing *law and order*.

I said a year ago that, under such circumstances, my belief was that they did the proper thing for Christian men to do, even to the killing of the bandit Morgan himself, especially when it came to protecting their wives and daughters and the little ones at home.

In yesterday's *Plain Dealer* (the day after Sunday, August 5) in four different places there were hold-ups and murders where drunken men had in their possession revolvers. Some of these things happened in the big city of Akron, only twenty miles from where I sit writing. Somewhere in our state—I think it was in one of the big cities, a policeman was called to quell a drunken row. The policeman ordered one of the drunken men to surrender and hand over his revolver. Instead of doing so, however, he shot the officer. This paper

OUR HOMES

A. I. ROOT

Ye have heard that it hath been said, Thou shalt love thy neighbor and hate thine enemy. But I say unto you, Love your enemies.—Matt. 5:43.

But I say unto you which hear, Love your enemies, do good to them which hate you, bless them that curse you, and pray for them which despitefully use you.—Luke 6:27.

quite a time to get him arrested and make him give up his weapon. Non-resistance is a nice thing to talk about, and we are sending out a little tract by the tens of thousands that recommends such a course among neighbors. But shall we let a drunken man go on?

I am sorry to say there are other things that make men crazy besides intoxicating liquors, or suppose we say cigarettes. The little tract I have mentioned hits the point exactly where it speaks of letting your mind run and dwell on real or fancied wrongs.

There have been two murders in Medina County recently because of grievances between two persons, and because the matter was allowed to grow and fester like a running sore. The first one was between two town officers. The second one was a very sad case of where a boy deliberately shot and killed his father. I presume this father was a drinking man, and had been cruel to his family. But the trouble that caused the murder was a quarrel over so small a matter as a few *seed potatoes*.

Let us now consider the present war that confronts the United States. I confess it has troubled and worried me, in regard to this whole matter of drafting and sending people to war, especially along the line I have been alluding to, "war on Christian principles." I have been so much helped by an account in the *Association News* (a Y. M. C. A. periodical) that I want to give the article here. It appeared recently, I am told, in the *North American Student* for May, 1917. Dean Bosworth is an old esteemed professor of the Oberlin Theological Seminary. Here is what he says about it. I have read it over several times; and I hope, my good friends, you will find it worth while to do the same:

THE CHRISTIAN WITNESS IN WAR.

The great majority of the American people believe

says the policeman may live, but it is doubtful. He was one of our best men, old in the business, and universally beloved. After the policeman had been shot, the man with the pistol frightened everybody else who attempted to interfere with him; and the community had

that the time has come when the United States must enter the war. The United States has entered the war; and the question is, How shall the Christian witness in war bear his testimony in the great Christian Enterprise?

1. In the first place, he bears his testimony by fighting from a Christian motive in face of strong temptation to fight from a lesser motive—*by fighting for a better world*. He feels that by fighting he will help to create a situation in which the common fatherhood of God and the international brotherhood of all men will find more perfect expression. The statement that it is democracy against monarchy is perhaps only part of the truth. The present war may turn out to be only a large item in a great world movement, the introduction of an era of internal revolution and class conflict that will include all nations, and more or less baptize all nations in blood.

We must not forget that entering the war to secure a better world logically commits us to the securing of a better America. The establishment of the Christian world ideal will involve changes in our own land. It means the purifying of American life from the gross social and industrial injustices of which we are this day guilty. Prussia designates not simply a geographical territory, but a disposition—a disposition which is found in all parts of the world and from which the world must be utterly purified—the disposition of the strong to override the weak. Our gross traffic in the daughters of the poor, our unjust treatment of the negro, the industrial wrongs inflicted on those who have no effective, orderly means of protest, are to be put away from American life as this rising tide of the less privileged classes surges on around the world.

2. The second note that sounds out from the Christian witness in war is *invincible love for the enemy* in face of the temptation to hate him.

This brings us to the great paradox of the Christian life—the Christian friendly to the man whom he must regard as an enemy, friendly to the man who has set himself resolutely against the good for which the Christian man resolutely stands. And yet it is this paradox that is so clearly found among the central assertions of Jesus:

Ye have heard that it was said, Thou shalt love thy neighbor, and hate thine enemy; but I say unto you, Love your enemies.

The Christian witness in war asserts himself resolutely against the enemy with an invincible good will. He brings all the force of his being, physical and spiritual, to bear against the enemy, with an unfailing good will. Force is absolutely non-moral. It is no more good or bad than is electricity. Moral quality appears only in the disposition of the man who uses force. Force may be applied to the mutilation of the body, as it is by the surgeon, or to the destruction of the physical life, as it is by the executioner, and there is no immorality in the act so long as the disposition of him who performed it is free from all ill will.

The Christian soldier, in friendship wounds the enemy. In friendship he kills the enemy. In friendship he receives the wound inflicted by the enemy. He keeps his friendly heart while the enemy is killing him. His heart never consigns the enemy to hell. *He never hates.* After he has wounded the enemy he hurries to his side at the earliest possible moment with all the friendly ministrations possible. The Christian in war looks forward with an indestructible hope that some time and somewhere he and his enemy shall find common ground and move forward shoulder to shoulder in some great enterprise of God.

3. The Christian witness in war bears his Christian testimony by the daily practice of immortality in the face of death. If the life beyond is to be a vital reality, we must conceive it in terms of that

which means most to us in the present life. We look forward to a *social immortality* and not merely to an individual existence.

We look forward to the future life, not as a personal bliss conferred as a reward of merit, not to unalloyed happiness, but rather to a *new and larger opportunity to work with others at great enterprises for the common good*—enterprises which will present many perplexing problems and lay heavy responsibilities upon us. The truly Christian man, the man fit for immortality, has long found his chief satisfaction in working with other men in all possible ways and at any cost for the common good. In entering the army he has put himself in readiness to make a supreme sacrifice for the common good.

The Christian testimony to the Great Enterprise is borne in war by fighting for a better world in the face of temptation to fight from some lesser motive; by invincibly loving his enemy in face of temptation to hate; by the daily practice of immortality in the face of death. What is before us, we do not know. The war upon which we have entered may be over in a few months. It may, thru some unexpected shifting of world conditions, be entering upon a longer and bloodier period than that thru which it has already passed. If it shall be soon over, God grant that the experience we are now passing thru may teach us in peace to apply ourselves with all the energy and self-sacrifice that we would show in war to the prosecution of the great Christian Enterprise.

Whether this great war be near its end or still near its beginning, the birth pangs of a new age are upon the world. The call is for men and women with the light of a new age on their faces. This light is on their faces because Christ their leader has shared with them his vision of a day when all men in the day's work everywhere find in God their father, in all men of every race their brothers, and in human life the beginning of immortality.

Please notice in the fore part of the above the expression “*fighting for a better world*.” I believe that is exactly what our United States is doing. Not only are we enlisting in the war and fighting for a better world, but we are fighting particularly for a better *America*. There are things *besides* intemperance that are injuring our nation that ought to be righted. The shameful riot against the colored people at East St. Louis recently is an instance.

We now come to the point of our two texts—can one go to war and *fight* when he has love for the enemy he is fighting? The illustration about electricity struck me forcibly. There is no such thing as good or bad electricity. Electricity is a force. It does not have a soul. A surgeon when he cuts and mutilates a human body does this cutting in love. It may be a member of his own family, but it must be done to save life. The same is true with the executioner. Let me digress a little right here.

Once in my life I saw a man hanged on the gallows. I knew him quite intimately. It seems he was something of a gambler. One night while he and three or four others like himself were playing cards for money, he lost all he had, and it seemed he was mad about it. One of the crowd succeeded in scooping the whole pile from all the rest.

He did not *need* money, for he was a stock-dealer, and already had quite a roll of bills that he had recently taken for a bunch of cattle. This young man who committed the murder ascertained that the stock-dealer carried the roll home instead of putting it in the bank. During the night he went into that home, with a keen sharp knife, and killed the father and mother and a little child. He secured the coveted roll of bills, got away, and it was weeks or months before he was detected. He had a fair trial, and was condemned to death. Electrocution was not then in vogue. But there were a good many protests against what some people called murder, even at that date—more than fifty years ago. I was well acquainted with the sheriff who released the drop as he stepped off the platform. Perhaps I might confess that it was such a shock to my young nerves that I grasped hold of a buggy-wheel near where I stood to keep from fainting.

Now comes the point to this little story. Somebody, right away after the execution, either told or said to the sheriff that he, the sheriff, was a *murderer*. But most people protested. The sheriff simply acted as a servant of the people. After a long and expensive trial the community, and, I might say, humanity and the laws of our land, decided that Streeter would have to give up his life as a warning to other people who might be tempted to do likewise, especially if he should get off scott free as so many other point-blank murderers *do* get off *just now*, fifty or more years later. I said right away that our good sheriff was no more a murderer than every man, woman, and child in that great crowd that gathered to see a public hanging. Thank the Lord that public hangings are just now out of date in Ohio. If a man *must* be put to death for the good of community let it be done with few or no witnesses. Did this sheriff I have mentioned have any spite or ill will toward the man he was called upon to put to death? Surely not.

Let us now go back to the article I have quoted—the special point where it says, “The Christian soldier in friendship wounds the enemy.” Once more, “In friendship he kills the enemy.” Then notice the words, “He never hates.” I hope that our boys who are enlisting will do their fighting without hate. And now comes the great point in this talk I have quoted: “After he has wounded the enemy he hurries to his side at the earliest possible moment, with all the friendly ministration possible. “If a midnight assassin gets into your home, do everything in your power to disarm him and

render him helpless; and as soon as you have succeeded in disarming him or getting the upper hand of him, with love in your heart bind up his wounds, get a physician, and do everything in your power to undo the mischief you have done him. I think the above expresses the highest type of Christian love that it is possible to conceive of. And then comes the grand crowning sentence of the whole tract: “We look forward to the future life, not as a personal bliss conferred as a reward of merit, not to unalloyed happiness, but rather to a new and larger opportunity to work with others at great enterprises for the common good—enterprises which will present many perplexing problems and lay heavy responsibilities on us.”

I confess the above gives me a better and grander view of future existence than I ever got before. Perhaps I am not exactly like other people; but with me, especially as old age comes on, I must be *busy* about something in order to be happy. Unless I am concerned in some “enterprise” I am unhappy; and the greater the enterprise (for the good of humanity), as our good brother expresses it, the greater is my enjoyment. In my previous Home paper I talked about “for whom are you working” and it rejoices my heart to feel that I can honestly answer that even in my old age I am working not only for a better *America* but for a *better world*. Brother Bosworth (and I hope he will excuse the liberty I take in so designating him) speaks about “fighting for a better world in the face of temptation to fight for some *lesser* motive.”

Ever since I have been reading the above I have kept asking myself the question, “Is this thing I am planning to do for a better world, or is it for some particular need or want of A. I. Root?” And then wells up my old short prayer, “Lord, help.” I desire not only to love my enemies, and to do good to those that hate me, but to ask God to help me, during the few years (or *months*) that I may be spared to work in this world, to give my whole time and attention to making the world better; and if it shall be possible, as the good brother suggests, may I be permitted to help make a *better* “God’s kingdom,” when God calls me to “help,” up there.

DEMAND AND SUPPLY; SOME SUGGESTIONS IN REGARD TO BUYING AND SELLING HONEY.

I think I mentioned some time ago that one of our beekeeping friends in Bradenton, Fla., was carrying his honey around from house to house and selling 3 pounds

for 25 cents. He is quite a poultryman, and sells eggs in the same way; and while he is delivering eggs he can, of course, deliver the honey. He puts 3 pounds of honey in a fruit-jar and gets the jar back at his next call. Well, at our semi-monthly convention, others who were getting 10 cents suggested that he should raise the price. His reply was that he could get 10 cents from some customers, but it would take a great deal more time. At 8 cents it went right off rapidly without any arguing, and he could get back quickly to his work. Furthermore, he said that other beekeepers in the vicinity had been retailing at 6 and 7 cents. Another beekeeper who had been selling at 10 cents said he could probably get 12½ cents from most of his customers, but it would take so much more time that he preferred to make it an even 10 cents—that is, of course, without a "container." Well, just now, Aug. 1, I have a letter from the friend first mentioned, saying he had about 3000 pounds which he would like to sell all in a lump, as he had become tired of peddling it out. I asked one of our honey-buyers what he could probably give for it. He replied that if it was up to the average Florida honey we could allow him 9 cents, we standing the freight.

There you have the matter, friends—a beekeeper who is carrying his honey around to houses, and selling it at 3 pounds for a quarter when he could have spot cash 9 cents for the whole lot almost right at his door! Now, this is only an illustration of what is going on all over the United States, and perhaps more or less all over the world. It is because of the unsettled condition of prices, or a want of harmony, if we may so express it, among buyers and sellers. There is no such trouble, or very little such trouble, with butter and eggs, because producers and consumers, with the help (?) of the middleman, have decided about what would be a fair valuation considering both producer and consumer. And there ought to be a friendly discussion and agreement in regard to these matters. With the help of the Department at Washington I think this will soon be brought about. There are difficulties, I know; but when all parties shall agree to the spirit of our Lord and Master, such as is taught in God's holy book, there will be no trouble about settling on a fair price for all parties concerned.

Suppose we examine briefly some of the difficulties. First, there is a difference in quality of butter, eggs, and honey. Strictly fresh eggs ought to command a few cents more a dozen, and I believe they usually do. Cold-storage eggs, sold for exactly

what they are, are usually several cents a dozen less.

Secondly, there is this matter of buying up the eggs and cornering the market until there seems to be a scarcity, and then the price goes up. And there might be gambling in butter, eggs, and honey a good deal as there is in wheat; but our government is trying hard just now to put an end to this sort of gambling. May the Holy Spirit give us wisdom and understanding in tackling this bad evil. You know I have strongly urged short cuts between producer and consumer; but even that may be abused as in the first illustration. At our Bradenton home in Florida eggs are frequently (or have been) down to 15 or 20 cents, say in March or April. Well, this price does not begin to pay for the feed for the chickens; and if eggs did not go up in the fall toward 40 to 50 cents it would nearly wind up the chicken business.

I have suggested cold storage so as to even things up; but the idea does not seem to have taken hold down in Florida. If you are reading the papers you are doubtless well aware that there has been a lot of severe criticism in regard to the middlemen, or those who buy and sell the necessities of life. Some time ago a lot of good women in Cleveland made a boycott on eggs, pledging themselves not to use eggs until the price should come down. This had its effect, of course; but without being fully posted in regard to the matter they started their boycott just as the hens began to moult; and instead of blaming the hens they blamed the comparatively innocent middleman. Now, if it were not for these same middlemen or cold-storage men we should have a state of affairs ever so much worse than now. The troubles about the proper price of milk are not exactly like the things I have mentioned, because milk is very perishable. But I fear that many times both producers and consumers are criticising severely the middlemen who are really their friends—at least to a certain extent.

A little illustration occurred right in front of our homes here in Medina a few days ago. Just as the basswoods came into bloom an army of tussock moths or worms began defoliating the basswoods. Ernest got out his spraying-machine and gave them such a drenching with arsenate of lead that the worms were wound up in short order. I was a little afraid he might do harm as well as good, and consulted my good friend Neille, the deaf-mute, who is entomologist for the shade trees in the great city of Cleveland. He at once pointed out great

clusters of a species of lady-bug on the trunks and branches of the basswood-trees. This insect was marshaling its forces to head off the tussock moth; but the arsenical poison killed friends and foes indiscriminately. In using arsenical poisons to head off the potato-beetle we kill the little spotted lady-bug that devours the eggs. For this reason I have tried to handle the potato-beetles by hand-picking, as far as possible.

In our last issue M.-A.-O. rather ridicules my plan of picking by hand the striped squash and melon bugs; and I wish to add right here what he failed to mention; and that is, that by a *very determined* "hand-picking," and leaving the crushed bugs scattered on the leaves of the plants I headed them off entirely; and my vines are now making great promise of both melons and squashes. But in order to come out a victor, for a little spell I looked after the bugs three or four times a day—in fact, every two or three hours, and they very soon learned that it was a matter of life and death if they did not get away just as soon as I came in sight. This is war time just now, and I believe in fighting; but shall we not be exceedingly careful to know exactly *before* we wage war to the bitter

death that we do not by some mistake kill *friends* as well as *foes*?

Just a word about the difficulties in having one regular price for honey. First and foremost there is a vast difference in the quality of honey. Some people who buy honey may think that the 9-cent honey I have mentioned is a very small price. Let me explain that, in buying honey from different sources all over the United States, we get light honey and dark honey as well as fine-tasting honey, and some that is not so fine. But most of the honey we get from Florida is more or less dark-colored, and looks has quite a great deal to do with honey. From California and some other places we get fine honey or that which is almost white; in fact, they are often called "water-white." The water-white California sage honey from the mountains made quite a sensation years ago, and this has commanded ever since a very high price. In bottling honey when shipping it by the car-load we try as far as possible to have the quality and color pretty nearly uniform; and this we do by making a blend. In order to have a sufficient amount of light-colored fine-flavored honey we sometimes pay almost twice the 9 cents I have mentioned, especially where we pay freight.



HEALTH NOTES

ROBBING SICK PEOPLE AND FRAUDULENT ADVERTISING

Mr. Samuel Hopkins Adams, and we have probably no better authority, tells us that ten per cent of the advertising before the general public is fraudulent. In our July issue my good friend M.-A.-O., page 572, mentions my crusade which I have carried on for almost half a century against fraudulent advertising; and I wish to put in a word once more right here, about the doctors and others who promise to do great things for your health for a certain sum of money. Most of them have a kind of "correspondence school" or health institute. Their regular fee is \$50, or may be only \$25; and if you read all their literature you may be inclined to think they are wonderful philanthropists; but if you neglect to bite at the first bait, in a couple of weeks or so they will give special reasons why they have cut the price in two for a limited time. If you do not bite then, still later you will get another offer. It may read something like this:

"A lot of my good friends who have been brought to health by our treatment, urge, for the sake of humanity, that I should, for a brief time, cut the price still lower in order to bring it within the reach of people who are absolutely unable to pay the regular price."

And then they cut it down to one-fourth. In order to see just how they work I have followed the thing thru several times, as I have mentioned in past years. The correspondence school for the aid of the memory is an example. I think the price was \$20.00; but after I waited until they came down to \$5.00 I sent the money; and the information received was not only old stuff that has been in print more or less for fifty years, but the whole thing could be furnished for 25 cents.

Then there was a correspondence school to give instruction in growing potatoes. I wanted instructions particularly for my use in Florida; and the advertisement said it would be given personally so as to fit the need of any given locality. Well, the instructions I got gave lengthy details in regard to the Colorado potato bug in Florida.

The great instructor did not even know that this potato bug has not yet made its appearance in Florida.

While there are a good many and an increasing number of periodicals that not only discriminate but absolutely guarantee every advertisement, there is no end of periodicals that accept "any old thing" provided they get their pay for its insertion. Here is an illustration:

Pretty nearly every poultry-journal still advertises "The Natural Hen Incubator." I have shown this up every little while for the past fifteen or twenty years. The advertisement reads, "Price \$3.00; no freight to pay." Now, any one would reasonably suppose they furnished an incubator for \$3.00, freight paid; but the real truth is, these advertisers have no incubator at all, and never did have. All they send you for your money is a single sheet of paper telling you how to make some nests with little yards to accommodate a dozen sitting hens, more or less, at one time. The thing has been pictured and described in our agricultural papers again and again during the last thirty or forty years. I think they have some sort of patent on their particular method of constructing these combined pens for several sitting hens. If you are so much taken up with the thing that you send your \$2.00, or a smaller sum, all well and good; but if you do not "bite" within a reasonable time you can have this single sheet of paper for less; and after a while for still less; and I think that finally, after you have held off long enough, you can get the whole "individual right" for 25 cents.

In our Jan. 1st issue, 1915, I wrote up at length an athlete who advertises physical training-courses, etc. To be fair I sent the advertiser a copy of what I was going to publish. He said if I put it in print he would sue for ever so many thousand dollars. It is now considerably over a year since the transaction; but I am still alive and exposing frauds.

My good friend H. W. Collingwood, of the *Rural New-Yorker*, showed up the same man, and in the same article he also mentioned a woman who advertised to give instructions so other women might become as good-looking as herself as she poses in various papers in her advertising. Well, friend Collingwood, in a kind letter to me in regard to these two health philanthropists, writes as below:

As for Miss Blank, nothing has been heard from her yet. She may be waiting to see how the other comes out on his suit. Nothing in the world would do me better than to see this lady compelled to get up in the morning along with

the ordinary farmer's wife, cook a good-sized breakfast for the hired men, then take care of the milk, clean up the breakfast dishes, go thru the motions of a good-sized wash, including a number of overalls of the aforesaid hired men. Then let her get up a good hearty dinner of baked beans, fried ham, potatoes, and a couple of apple pies on the side. Then let her do her baking of about 25 good-sized loaves of bread. By this time the clothes will come in off the line, and she will find about three square yards of holes to be darned up and well provided for. Probably a couple of the children will then come in. One has cut his finger, and the other has run a splinter into his toe. The woman must act as surgeon and comforter. Then a couple of the other children get into a scrap, and mother must come out and act as peace-maker. Then comes father out of the field, feeling very much discouraged. Things are going all wrong, and he wants to quit. The mother must act as peace-maker as well as peace-maker; and by the time father has been tuned up ready to take hold of things properly, the hired men are looking at the kitchen and thinking about supper. That must be put over at once, then the dishes are to be washed once more, the clothes are to be prepared for ironing next day, and half a dozen other jobs are waiting. Now, I want to have Miss Blank go thru that job and see how well she will keep her remarkable shape which she is so glad to put before the public and pay for the privilege of doing so. When Miss Blank goes a full week following the job I have outlined for the farmer's wife, and turns up smiling as she does in her advertisement, and with her shape as fine as it is when she started, I will guarantee to buy her method and have it applied to five different farmers' wives; but if I were a sport I would bet that Miss Blank would quit before supper time. That's what I should like to say about Miss Blank; but I suppose if I did we should get another libel suit for a million dollars; and with the high cost of paper, and the coming charge for postage, libel suits are not assets. At any rate, it seems to me so perfectly absurd for these creatures to talk as they do, and try and get the money out of sensible people for going thru their motion. I have been told by those who have patronized these athletic advertisers that they are expected to lie down flat on the floor, roll themselves over and over, kick up their heels so as to have their toe come over and touch their head, and, for all I know, stand on their heads at times. Surely the farmer's wife whose daily stunts I have outlined above has little time for turning somersaults, dancing the tango, and other things which seem to keep Miss Blank in shape.

New York.

H. M. COLLINGWOOD.

I have thought best not to submit names, as most of our readers will notice; and one reason why I give this portion of the letter is that friend Collingwood so graphically describes the woman spoken of in Proverbs —the one whose "price is far above rubies."

I have given the above because it pays tribute to a class of women mostly from the farms of our nation who, I greatly fear, have never had the full credit that belongs to them. When this wicked war is ended, and peace and good will shall prevail, it is my honest belief that the credit will be due to the good wives out on the farm as much as to the manhood who went forth and crossed the ocean to do battle for the perpetuation of the stars and stripes. Truly "her price is far above rubies."

GOATS AND GOATS' MILK.

From the number of letters that are coming continually in regard to goats, especially goats' milk, for the babies, it would seem I have seldom struck upon anything of such general interest; and while we have quite a lot of letters, I have been feeling for some time that I wanted something in regard to the matter from good authority, and, if the good friends will excuse me, something from some source where there can be no suspicion that the party or parties are interested in making sales; and it occurred to me that our various experiment stations of the different states should give us something definite and up to date; therefore I wrote to the director of our Ohio Experiment Station as follows:

Friend Thorne—If you have had time to look over our journal you may have noticed the many articles and inquiries in regard to goats for milk. Now, I don't suppose you have made any tests of goats at your station; but can you tell us if the stations of any other state have made similar experiments? We have several letters from parties who say they get two quarts and sometimes three quarts a day of goats' milk. I believe they are kept more for babies, or babies in poor health, than for any other purpose. The testimonies in regard to saving babies' lives by the use of goats' milk seem to indicate that it certainly has remarkable virtues in that way. I know there are several goat periodicals; but some evidence from an experiment station would be worth more to me than anything else. Would it be outside of your province to get a goat or two to be kept on the station farm?

Medina, O., May 22, 1917. A. I. Root.

In response to the above I received the following:

Mr. A. I. Root—Director Thorne has handed to me your letter regarding milch goats, not because I have charge of dairy work here, for Professor C. C. Hayden has charge of that, but because I own some milch goats. I have found them to be rather generous producers. One gave about 3 quarts per day for awhile after kidding last year, and a two-year-old $2\frac{1}{2}$ quarts now I should judge. I have sometimes noticed an undesirable flavor; but aside from these times the milk is of exceptionally fine quality, altho ours seems not to be so high in fat as some report. One of my does milked $10\frac{1}{2}$ months, and would have milked longer had I not dried her up. Mr. C. P. Funk, of Wooster, who bred my foundation does, has eleven does of different ages. We have at the head of our flocks the buck Balmat 336, whose dam, imported Loretta, is said to have yielded 7 quarts of milk per day when owned by Mr. David Zook, who lives near Smithville, a few miles from here. Mr. Zook has a rare fund of goat lore, and I would suggest that you see or write him if you are interested in goats.

Your letter is referred to Professor Hayden, who is far better able than I to give data regarding technical studies relative to the milch goat and her products.

Assuring you that we shall gladly serve you whenever possible, I am

Yours very truly,
Wooster, O., May 24, 1917. B. E. CARMICHAEL.

Please notice, friends, the concluding sentence. If I am correct, the experiment

stations of the different states are always ready, not only to give us the information they can give, but also to hunt up facts, and, furthermore, make experimental tests of anything concerning the public welfare—especially anything pertaining to milk, butter, and cheese, and the health of our babies. Do not be backward about applying to your own station when you want unbiased and reliable information.

SWEET CLOVER IN CALIFORNIA, AND SOMETHING ABOUT GOATS.

Mr. Root—I enclose an article on milch goats.

You asked to hear from growers of sweet clover, in regard to its blooming the first year. I think it always blooms the first year in California; at any rate, it does in the valleys. Last year I purchased my seed of the Dadants, and it is just the same as we have always had here and up north where we lived. It bloomed profusely after cutting twice. I have been pasturing the field this year, and now it is in full bloom. Of course, it is not very tall now, as stock keep it down.

Manteca, Cal.

ERNEST E. WARREN.

The above reminds me that for two seasons I have had yellow sweet clover in Florida that grew very rapidly to a height of three or four feet, and blossomed only three or four months after sowing. This would indicate that it behaves there very much as in California. These plants, however, have yellow bloom. I have never yet succeeded in getting the white sweet clover to grow and blossom at our Florida home.

Below is the clipping on goats.

TYPES OF ARISTOCRATIC GOATS.

And thou shalt have goat's milk enough for thy food, for the food of thy household, and for the maintenance of thy maidens.—PROVERBS 28:25.

But there are goats and goats, each having its emphatic advocates, and each its peculiar merits, no doubt. In Switzerland the goat is the family cow, and her product a considerable item of revenue besides. The supply of pure-bred Toggenburg and Saanen goats in this country is derived principally from a stock brought over from Switzerland in 1904, together with a few that were imported prior thereto, all importations since 1905 having been prohibited by the United States Government. The Toggenburg has a delicately formed head, upright ears, and a graceful, deerlike appearance. It is of medium size, with a slender neck and of a drab color with white or grayish markings. The milk production is greater in quantity, but less rich than that of the Anglo-Nubian and some other breeds.

The Saanen, also a pure-bred Swiss goat, is considerably larger than the Toggenburg, usually hornless, and of a creamy-white color. An expert judge of these creatures, Mr. F. S. Peer, who made the large importation of Swiss goats in 1904, says:

"Taking a given number of each breed as they come, I would expect the Toggenburgs to show the largest total yield; but among the best of each breed I would expect the Saanen to win."

The Anglo-Nubian is an English cross of the Nubian with a pure English doe, made half a century ago, and has become a distinct breed. It is of various colors, preferably black and tan or reddish brown, frequently with black or black and white markings. It has a marked Roman nose, heavy

pendant ears, and the female is without beard. The milk production is less in quantity than that of the Swiss goats, but richer in butter fats. The breeders of this goat claim that the buck is practically odorless, the milk of a very superior quality, while another important feature of value is that the kidding age is reached earlier. It would seem, therefore, that the cross of Anglo-Nubian buck with a Toggenburg or Saanen doe should bring exceptionally promising results, both for milk and kidding—"a veritable pocket edition of the modern milch cow, bound in goatskin," as one of our correspondents happily phrases it.

Since the goat is free from tuberculosis, its milk is far more valuable than that of the cow for the nurture of babies and invalids, and it is of first importance also for the manufacture of cheese and fine confectionery. Probably we shall not arrive at a complete understanding of the full worth of this product until it has become more generally available; but it is even now evident that the goat is an important institution.

It may also be said that it is conceded to have attained a higher degree of perfection on the Pacific Coast than elsewhere in America.

Mary B. Harris.

BEEKEEPING IN SOUTHWEST FLORIDA; ALSO SOMETHING IN REGARD TO PRICES FOR HONEY.

Mr. Root:—

My average from palmetto is about 34 pounds per colony. I have secured decidedly the poorest results from my home apiary, and I have concluded to move almost all of the bees in the home apiary to other locations. My Cedar Hammock apiary, less than two miles to the southeast, has given an average of over 50 pounds.

At Cortez and on this side of the bay I have 60 colonies. These locations are not the best for palmetto, but they have never failed me in giving a good yield of seagrape and mangrove. I was at Cortez yesterday, and found the hives filling from seagrape. Mangrove yields till Aug. 1.

This week I expect to move more bees to these apiaries. It is quite a job to move overflowing colonies with one or two supers, but I think it will pay.

Last Thursday a movement was set on foot which I believe will result in decided good to the beekeepers of this section. Mr. Christopher asked me to come to his place and meet other beekeepers with the object of uniting on a uniform price for our honey.

The nine beekeepers present represented over 1300 colonies of bees. At our next meeting we hope to have twice as many present, who will represent many more bees.

In regard to a uniform price, it was agreed that honey sold in a container less than the 60-pound can should be sold for not less than 10 cents a pound net. That is exclusive of cost of the container. Sixty-pound cans to be sold for not less than \$6.25, or \$12.50 a case. By the barrel at 10 cents, including the barrel. I am not sure we can sell at these prices.

A. E. AULT.

Bradenton, Fla., June 10.

I heartily indorse the plan of having beekeepers meet together and agree on prices for honey; and if some one in the vicinity, as often happens, insists on selling at a lower price than agreed on, let the association take all of his stock. This is exactly what is done with butter and eggs and almost every other staple article of food; and

in many other ways co-operation between the beekeepers of a locality will be very helpful.

The above report also illustrates the fact that very different results may be had from apiaries only three or four miles apart.

DISARMAMENT, AND SINKING TO THE BOTTOM OF THE SEA THE IMPLEMENTS OF WAR THAT HAVE COST UNTOLD MILLIONS, INSTEAD OF THE SHIPLOADS OF GRAIN, THE PRODUCT OF HONEST LABOR.

After Our Homes for this issue was put in type I came across something in the *Plain Dealer* for Aug. 9 that hits right along in the same line. I make two extracts below:

The controlling United States view is that the present world-wide conflict has become a war to end war.

Officials believe strongly, too, that the hour may be nearer than any one thinks when the warring nations may be able to reach an agreement.

Disarmament, the dream of statesmen thru the ages, would prove a blessing to mankind immeasurable in its effects. If it were realized, everybody could feel that the tremendous sacrifices of this war had not been made in vain.

If I get the correct idea of "disarmament" as expressed in the above, it means that, instead of continuing to destroy human life and sinking shiploads of grain that have cost here in America no end of hard and severe toil, we should sink to the bottom of the ocean the implements of war that have cost untold millions because no nation on earth has any more need of such creations that must have come from the prince of darkness and from the bottomless pit. Then shall be ushered in the glad time when God's kingdom shall come, and his will be done on earth, instead of that of Satan and his allies.

NO MORE GIVING OR RECEIVING TIPS IN TENNESSEE.

The item below I clipped from the corner of a bill of fare on one of the dining-cars while passing thru Tennessee.

ANTI-TIPPING LAW OF TENNESSEE:

Under the law of Tennessee, adopted March 24, 1915, any person giving to any employee of this company a tip or gratuity; any such employee receiving or accepting a tip or gratuity; and any officer or agent of the company wilfully permitting the giving and receiving of such tip or gratuity, is subject to a fine of not less than \$5, nor more than \$25, for each offense.

The above, as I understand it, is to prevent the waiter, especially the colored waiter, from giving his sole attention to patrons who are liberal in giving tips, and letting common people, or every one who finds it hard enough to pay the printed prices, to get along as best he can. I for one will rejoice to see this anti-tipping law become not only national but world-wide.

Classified Advertisements

Notices will be inserted in these classified columns for 25 cts. per line. Advertisements intended for the department cannot be less than two lines, and you must say you want your advertisement in the classified columns or we will not be responsible for errors.

HONEY AND WAX FOR SALE

Beeswax bought and sold. Strohmeyer & Arpe Co., 139 Franklin St., New York.

Clover-basswood honey, well ripened, of excellent quality, put up in bright new 60-lb. cans. O. W. Bedell, Earlville, N. Y.

FOR SALE.—4000 pounds basswood honey out of combs not bred in; in double-cased 60-pound cans; 15 cents per pound. Sample 10 cents. A. S. Tedman, Weston, Mich.

FOR SALE.—Clover honey in sixty-pound cans, 15c per pound; No. 1 white comb, \$4.50 per case of 24 sections; No. 2 white, \$3.50 per case, six cases to carrier. H. G. Quirin, Bellevue, Ohio.

FOR SALE.—Raspberry, basswood, No. 1 white comb, \$3.00 per case; fancy, \$3.25; extra fancy, \$3.50; 24 Danz. sections to case, extracted, 120-lb. cases, 15 cts. per lb. W. A. Latshaw Co., Clarion, Mich.

FOR SALE.—White-clover honey of the finest quality; was left on the hives until thoroughly ripened; it is put up in new 60-lb. tin cans. Price \$8.50 a can. Sample by mail 10c. G. A. Barbisch, Rt. 1, La Crescent, Minn.

RASPBERRY HONEY.—Was left on the hives until thoroughly ripened by the bees. It is very delicious. It is put up for sale in 60-lb. tin cans. Price \$9.00 a can; 1-gal. cans of 12 lbs. net weight, \$2.00 each. Sample by mail 10 cts., which may be applied on any purchase of honey. Elmer Hutchinson, Rt. 2, Lake City, Mich.

HONEY AND WAX WANTED

WANTED.—Comb and extracted honey. J. E. Harris, Morristown, Tenn.

WANTED.—5000 lbs. white-clover extracted honey; state price, how packed; send sample. L. P. Zimmerman, 436 E. Market St., Louisville, Ky.

WANTED.—Comb and extracted honey at jobbing prices. National Honey Producers' Association, Kansas City, Mo.

WANTED.—Carload or less white and darker extracted. State quantity, quality, packing, and lowest price. HOFFMAN & HAUCK, Richmond Hill, N. Y.

WANTED.—Extracted honey in both light and amber grades. Kindly send sample, tell how honey is put up, and quote lowest cash price delivered in Preston. M. V. Facey, Preston, Minn.

WANTED.—White and light amber extracted honey, in any quantity. White clover and raspberry preferred. I. J. Stringham, 105 Park Place, New York.

WANTED.—Carload or less lots white and buckwheat comb honey. State quantity, grading, section size, and lowest price. HOFFMAN & HAUCK, Richmond Hill, N. Y.

WANTED.—Extracted light honey of good flavor, white clover preferred. Kindly send sample, and quote lowest price delivered at Richmond, N. Y. J. Stevenson, Richmond, S. I., N. Y.

WANTED TO BUY a quantity of dark and amber honey for baking purposes. A. G. Woodman Co., Grand Rapids, Mich.

BEESWAX WANTED.—We are paying higher prices than usual for beeswax. Drop us a line and get our prices, either delivered at our station or your station as you choose. State how much you have and quality. Dadant & Sons, Hamilton, Illinois.

FOR SALE

FOR SALE.—A full line of Root's goods at Root's prices. A. L. Healy, Mayaguez, Porto Rico.

FOR SALE.—40 gross individual jars, silver-plated tops. What offers? J. Stevenson, Richmond, S. I., N. Y.

Beekeepers, let us send you our catalog of hives, smokers, foundation, veils, etc. They are nice and cheap. White Mfg. Co., Paris, Tex.

FOR SALE.—One-ton Reo truck in good shape. A bargain for the man who needs it. Address No. 24, care of A. L. Root Co., Medina, O.

150 envelopes, 150 letter-heads, size 6 x 9 1/2 inches, printed and mailed for \$1.00. Samples free. Sun Co., East Worcester, New York.

SEND TODAY for samples of latest Honey Labels. Not only the most attractive, but also the lowest in price. Samples free. Liberty Pub. Co., Sta. D, Box 4-E, Cleveland, Ohio.

RENDER your own combs and cappings without trouble or expense. Make foundation for yourself and others easy. Address J. J. Angus, Grand Haven, Mich.

THE ROOT CANADIAN HOUSE.—73 Jarvis St., Toronto, Ont. (note new address). Full line of Root's famous goods; also made-in-Canada goods. Extractors and engines; GLEANINGS and all kinds of bee literature. Get the best. Catalog free.

WANTS AND EXCHANGES

WANTED.—Albino queens. Who has Albino? D. E. Lhommedieu, Colo, Iowa.

WANTED.—Novice extractor, also wax press. Lowest price. J. Stevenson, Richmond, S. I., N. Y.

BEESWAX WANTED.—For manufacture into Weed Process Foundation on shares. Superior Honey Co., Ogden, Utah.

WANTED.—To buy 200 colonies of bees. Must be on wired combs of foundation. Also extracted honey outfit. Address Elzie Perkins, Valley View, Ky.

TO TRADE.—New 6 x 8 view camera outfit; speed lens; cost \$65. Want combs, hives, supers, extractor, or cash. Art Tucker, Shiloh, Ohio.

WANTED.—To hear from parties having foundation-mill to sell, either new or needing slight repairs. J. J. Angus, Grand Haven, Mich.

WANTED.—To exchange a one-minute "Mandel-Ette" camera for 10-fr. hives or supplies. Camera cost \$5.00. E. A. Rahn, Taylor Ridge, Ill.

Wanted, at very low price, 60 to 70 colonies of bees, with accessories. J. Schick, 2318 Irving Pk. Bld., Chicago, Ill.

WANTED.—Shipments of old comb and cappings, for rendering. We pay the highest cash and trade prices, charging but 5 cts. a pound for wax rendered.

The Fred W. Muth Co., 204 Walnut St., Cincinnati, O.

OLD COMBS WANTED.—Our steam wax-presses will get every ounce of beeswax out of old combs, cappings, or slumgum. Send for our terms and our new 1917 catalog. We will buy your share of the wax for cash or will work it into foundation for you. **Dadant & Sons, Hamilton, Illinois.**

GOATS

FOR SALE.—Two $\frac{1}{2}$ Nubian buck kids, five $\frac{3}{4}$ doe kids, one yearling, and one 4-year-old.

R. M. Collins, 630 S. 22d St., Muskogee, Okla.

REAL ESTATE

FOR SALE—Most lovely spot in south Florida; ten acres rich soil near city; improved on main road. Ideal for honey production; at sacrifice.

J. A. Shade, Sarasota, Fla.

FOR SALE.—126 colonies of bees and extras. Also home consisting of two acres, with improvements on, in the southeastern corner of South Dakota. A No. 1 honey location. Call or write

F. A. Dahl, Gayville, S. D.

A small farm in California will make you more money with less work. You will live longer and better. Delightful climate. Rich soil. Hospitable neighbors. Good roads, schools, and churches. Write for our San Joaquin Valley illustrated folders free.

C. L. Seagraves, Industrial Commissioner A. T. & S. F. R'y, 1934 R'y Exchange, Chicago.

FOR SALE.—Small truck and poultry farm on improved road within 12 miles of one of the best markets in Ohio. Large house and barn; 2 greenhouses, 18 x 60 ft.; all buildings in good condition; apple orchard in bearing, and 40 apple and peach trees one year old. Other fruit of all kinds. A bargain. For particulars write W. L. Niederhiser, Rt. 2, Calla, Ohio.

THIS LITTLE FARM IN VIRGINIA is an ideal poultry and fruit proposition; located in fine community at railroad station and general store in beautiful Shenandoah Valley; 2 miles from good town; modern five-room bungalow, nicely furnished; price \$1250; easy terms. Send for magazine and list of farms from \$500 up. F. H. LaBaume, Agr'l Agt. N. & W. Railway, 246 N. & W. Building, Roanoke, Va.

FOR SALE.—Two large lots, large six-room house, electrically lighted, good cemented cellar; cannot be beat for wintering bees; good well, cistern, number of fruit-trees, 35 swarms of bees; 60 10-fr. dove-tailed hives, 500 Hoffman-fr. wire combs not over two years old; all fixtures to go with extracting. All kinds of factory work near by. A bargain. This ad. will not appear again. Write J. S. Kendall, Chemung, Ill.

BEES AND QUEENS

Finest Italian queens. Send for booklet and price list. Jay Smith, 1159 DeWolf St., Vincennes, Ind.

PHELPS queens will please you. Try them and you will be convinced. C. W. Phelps & Son.

Well-bred bees and queens. Hives and supplies. J. H. M. Cook, 84 Cortlandt St., New York.

FOR SALE.—Bees, queens, and honey in their season. H. G. Quirin, Bellevue, O.

FOR SALE.—Golden Italian queens. Untested, 50 cents each. J. F. Michael, Winchester, Ind.

FOR SALE.—40 colonies of Italian bees. For particulars address Henry S. Smith, Brooklyn, Wis.

When it's GOLDENS it's PHELPS. Try one and be convinced.

C. W. Phelps & Son, Binghamton, N. Y.

Business first queens. Select untested, \$1.00 each; \$9.00 a dozen; no disease. Price list free. M. F. Perry, Bradenton, Fla.

Three-banded Italian queens and a few hundred pounds of bees for sale. Safe arrival guaranteed. J. A. Jones, Rt. 3, Greenville, Ala.

Gray Caucasian Queens, untested, \$1.00; select untested, \$1.25; tested, \$1.50; select tested, \$2.00. H. W. Fulmer, Box G, Point Pleasant, Pa.

Try ALEXANDER'S Italian queens for results. Untested, each, 75 cts.; 6 for \$4.25; \$8 per dozen. Bees by the pound. C. F. Alexander, Campbell, Cal.

Tested leather-colored queens, \$2.00; after June 1, \$1.50; untested, \$1.00; \$10.00 per dozen, return mail. A. W. Yates, 3 Chapman St., Hartford, Conn.

Vigorous prolific Italian queens, \$1; 6, \$5. June 1. My circular gives best methods of introducing. A. V. Small, 2302 Agency Road, St. Joseph, Mo.

Italian queens, THE HONEY GATHERERS. Price one dollar each, nine dollars a dozen. Edith M. Phelps, 259 Robinson St., Binghamton, N. Y.

FOR SALE.—450 hives of bees, all well located in best alfalfa and sweet-clover localities; also shop and fixtures in town.

W. L. Porter, Caldwell, Idaho.

FOR SALE.—Small apiary of 25 colonies Italian bees in 8-frame hives; quantity of supers, new hives, and accessories.

O. Flinch, Huntington, N. Y.

Queens that boost your bank account, three-band or golden. Untested, 75 cts.; tested, \$1.00; select, \$1.50. J. B. Marshall & Son, Rosedale Aparies, Big Bend, La.

FOR SALE.—190 colonies of Italian bees. Ideal location for rearing queens and combless bees; two miles from New Orleans.

M. Stevenson, Westwego, La.

Finest Italian queens, June 1 to November, \$1.00; 6 for \$5.00; my circular gives good methods. Ask for one.

J. W. Romberger, 3113 Locust St., St. Joseph, Mo.

FOR SALE.—Bright Italian queens at 65 cts. each; \$6.50 per doz.; ready April 15. Safe arrival and satisfaction guaranteed.

T. J. Talley, Rt. 3, Greenville, Ala.

Southwest Virginia five-band Italian queens, the fancy comb-honey strain, gentle to handle. They will please you. Try one. \$1.00 each.

Henry S. Bohon, Rt. 3, Box 2112, Roanoke, Va.

Golden and three-banded Italian queens for July, Aug., and Sept. Now, only 50 cents each, 6 for \$3.00, 12 for \$6.00, virgins 30 cts.

G. H. Merrill, Pickens, S. C.

FOR SALE.—Golden Italian queens of an improved strain; the bee for honey, hardiness, gentleness, and beauty. Untested, \$1.00; tested, \$2.00. Wallace R. Beaver, Lincoln, Ill.

FOR SALE.—Golden Italian queens that produce golden bees; for gentleness and honey-gathering they are equal to any. Every queen guaranteed. Price \$1; 6 for \$5. Wm. S. Barnett, Barnetts, Va.

Bright Italian queens for sale at 60 cts. each, \$6.00 per doz.; virgins, 25 cts. each. Safe arrival and satisfaction guaranteed.

W. W. Talley, Rt. 4, Greenville, Ala.

FOR SALE.—Three-banded Italian bees and queens from the best honey-gathering strains obtainable. Untested queens, 75 cts.; 6, \$4.25; 12, \$8.00. Tested queens, \$1.50 each.

Robt. B. Spicer, Wharton, N. J.

Untested Italian queens for sale.—1, \$1.00; 3, \$2.75; 6, \$5.00; 12, \$9.00. Satisfaction guaranteed.
F. L. Johnson, Mt. Airy, N. C.

ITALIAN BEES AND QUEENS.—1, \$1.00; 12, \$9.00. Satisfaction guaranteed.
A. E. Crandall & Son, Berlin, Conn.

"She-suits-me" bright Italian queens; \$1 by return mail till Oct. 1.
Allen Latham, Norwichtown, Ct.

FOR SALE.—Warranted queens from one of Dr. Miller's breeders, 50 cts. each.
Geo. A. Hummer, Prairie Point, Miss.

FOR SALE.—84 colonies of bees on wired Hoffmann frames, nice clean combs in 10-frame hives; no disease; 25 extra hives; 85 comb-honey supers.
Wheeler's Comb-Honey Apiaries, Rhinecliff, N. Y.

FOR SALE—17 colonies in 10-fr. and 43 colonies in 8-fr. Hoffman; excellent strain, 3-banded, no disease. Owner selling to stock large farm.
E. C. Schiesser, Rt. 1, Liverpool, N. Y.

QUEENS OF SUPERIOR QUALITY.—Untested, 75c each, \$8.00 per doz.; select untested, 90c each, \$9.00 per doz.; select tested, \$1.50 each, \$15.00 per doz.; extra select breeder, \$5.00.

H. N. Major, South Wales, N. Y.

Golden Italian queens that produce golden bees; the highest kind, gentle, and as good honey-gatherers as can be found; each, \$1.00; 6, \$5.00; tested, \$2.00; breeders, \$5.00 to \$10.00.

J. B. Brockwell, Barnetts, Va.

My bright Italian queens will be ready to ship April 1 at 60 cts. each; virgin queens, 30 cts. Send for price list of queens, bees by the pound and nucleus. Safe arrival and satisfaction guaranteed.
M. Bates, Rt. 4, Greenville, Ala.

Golden Italian queens from June to November, untested, 75 cts.; 6, \$4.25; doz., \$8.00; tested, \$1.25; 6, \$7.00; select tested, \$1.50; breeders, \$5.00. Bees by pound or nucleus. Pure mating guaranteed. Send for circular. J. I. Danielson, Fairfield, Ia.

None but the best Queens are sent out by us—three-band Italians that are guaranteed to give satisfaction. Untested queens, 75c; \$8.00 per doz.; tested, \$1.00 each. No disease. Orders filled promptly. J. W. K. Shaw & Co., Loretteville, La.

Golden Italian queens that produce gentle golden bees; good honey-gatherers; no foul brood. Select tested, \$1.25; tested, \$1.00; untested, 65 cts.; 6, \$3.75; 12, \$7.00. No nuclei or bees for sale.
D. T. Gaster, Rt. 2, Randleman, N. C.

Queens, Queens, Queens. We are better prepared than ever to supply you. Untested, 55c each; tested, \$1.00 each; select tested, \$1.65 each. See our big illustrated ad. on first leaf of this journal.
W. D. Achord, Fitzpatrick, Ala.

The demand for PHELPS' GOLDENS has been so great that we will not be able to fill orders for less than \$12.00 a dozen for the remainder of the season. Single queens \$1.00 as usual. THEY ARE BEAUTIES! Try one. C. W. Phelps & Son.

FOR SALE.—Three-band Italian queens from best honey-gathering strains obtainable. Untested queens, 75 cts.; 6, \$4.25; 12, \$8.00. Safe arrival and satisfaction guaranteed.

W. T. Perdue, Ft. Deposit, Ala.

Golden Italian queens from a breeder that was a first-premium winner at Illinois State Fair in 1916; untested, 75 cts.; six for \$4.25; doz., \$8.00; select untested, \$1.00; 6 for \$5.00; 12 for \$9.00; tested, \$1.50; 6 for \$8.00.

A. O. Heinzel, Rt. 3, Lincoln, Ill.

PHELPS GOLDEN ITALIAN QUEENS combine the qualities you want. They are great HONEY-GATHERERS, BEAUTIFUL and GENTLE. Mated, \$1.00; dozen, \$12.00; tested, \$3.00; breeders, \$5.00 and \$10.00. C. W. Phelps & Son, Wilcox St., Binghamton, N. Y.

QUEENS.—Improved three-banded Italians, bred for business, June 1 to Nov. 15, untested queens, 75 cts. each; dozen, \$8.00; select, \$1.00; dozen, \$10.00; tested queens, \$1.25 each; dozen, \$12.00. Safe arrival and satisfaction guaranteed.

H. C. Clemons, Rt. 3, Williamstown, Ky.

North Carolina-bred Italian queens of Dr. C. C. Miller's famous strain of three-banded Italian bees; July 1 until Oct. 1, untested, 75 cts.; per doz., \$8.00; tested, \$1.00; dozen, \$11.00; select tested, \$1.50. Safe arrival and satisfaction guaranteed.

L. Parker, Rt. 2, Benson, N. C.

My choice northern-bred Italian queens are hardy, vigorous, and prolific. May and June, untested, \$1.50; select unit., \$2.00; tested, \$3.00; after July 1, unit., \$1.00; select unit., \$1.25; tested, \$2.00; select tested, 2.50. Free circular.

F. L. Barber, Louisville, N. Y.

TENNESSEE-BRED QUEENS.—My three-band strain that has given such universal satisfaction for over 40 years. Orders filled promptly or money refunded by first mail. 1000 nuclei in use. Tested, in June, \$1.75; untested, \$1.00; in July, \$1.50 and 75 cts. Postal brings circular.

John M. Davis, Spring Hill, Tenn.

Put a good queen in each colony now, when good queens can be had promptly at low prices. The wise beekeeper does not buy queens in spring when they are scarce, high in price, delivery uncertain. He buys now and insures disease resistance, safe wintering, and a good honey crop. Our Italian queens give these three qualities and are now at their best; 1, 75 cts.; 6, \$4.25; 12, \$8.00; 25, \$15.00; 100, \$50. J. B. Hollopeter, Queenbreeder, Rockton, Pa.

FOR SALE.—75 colonies of fancy Italian bees, guaranteed free from disease; all combs built from full sheets of foundation and wired; nearly all young queens; a fancy comb-honey strain; are second to none as honey-gatherers and hardiness; fixtures for both comb and extracted honey. Also farm of 50 acres in an A No. 1 location for clover, basswood, and buckwheat. Reason for selling, must seek milder climate for health; low price for quick sale. Thos. Broderick, Rt. 13, Moravia, N. Y.

QUEENS FOR SALE.—Italian queens that produce workers of a honey-gathering quality that are excellent; none better for an all-purpose bee. Red-clover three-banded Italians are the kind to have. I have selected my strain from the biggest and best breeders of the U. S. They are fine. Send in your orders. I am closing now for winter. Untested, 1, 75 cts.; doz., \$6.50; select untested, 1, \$1.00; dozen, \$7.50; tested, 1, \$1.25; select tested, 1, \$1.50; extra select tested, 1, \$2.00; best breeders, \$10; fair breeders, \$5.00. Bees by pound. See advertisement of my bees, July and August GLEANINGS.

H. B. Murray, Liberty, N. C.

Golden three-band Italian and Carniolan queens: Virgin: 1, 50c; 6, \$2.50; 12, \$4.00; \$6.25.00. Untested: 1, 75c; 6, \$4.20; 12, \$7.80; 100, \$60.00. Select untested: 1, 85c; 6, \$4.80; 12, \$9.00; 100, \$70.00. Tested: 1, \$1.00; 6, \$5.40; 12, \$10.20; 100, \$80.00. Select tested, 1, \$1.25; 12, \$13.80; 100, \$100. Breeders: \$3.00 each. Bees in combless packages: 1/2 lb., 75c; 1 lb., \$1.25; 2 lbs., \$2.25. Nuclei: 1 frame, \$1.25; 2 frames, \$2.25; 3 frames, \$3.00. Add price of queens wanted. We guarantee safe arrival and no disease.

C. B. Bankston, Buffalo, Tex.

Queens of my own and Dr. C. C. Miller's 3-band select stock the rest of this season, 75 cts. each; \$65.00 per 100; tested, \$1.50 each; \$15.00 per dozen; breeders, \$5.00 and \$10.00. A fine breeder sent on two frames of brood in nuclei. \$10.00.

Curd Walker, Jellico, Tenn.

I think so much of my Walker queens and bees that I have been able to induce my friend Mr. Walter Hall to try one. I am quite sure he will find them as good as I recommend. I have in my apiary queens from four different breeders of queens, but the Walker beats them all. When I want more queens yours are good enough for me even if the price is a little steep. J. M. Meadows, Dorton, Tenn.

ITALIAN QUEENS, northern-bred, three-banded, highest grade; select untested, guaranteed; queen and drone mothers are chosen from colonies noted for honey-production, hardiness, prolificness, gentleness, and perfect markings. Price, one, \$1.00; 12, \$9.00; 50, \$30.00. Send for circular.

J. H. Haughey, Berrien Springs, Michigan.

HELP WANTED

WANTED.—An experienced apiarist, also to work in winter and bad days in factory or supply house, year-round work. State wages, age, and experience.

Carl F. Buck, Augusta, Kans.

HELP WANTED.—Factory positions, men for lumber-yard and woodworking-machine operators; boys over 16 years for helpers on woodworking-machines; women and girls over 17 years to work on light manufacturing. Steady employment to competent workers. Apply by letter, giving previous experience, if any. Address The A. I. Root Co., Medina, O.

Special Notices by A. I. Root

Just at present our stock of "The Natural History of the Honey Bee," by H. V. Buttel-Reepen, is exhausted, and we shall be dead in filling orders till a new issue now in process of printing can be gotten out. We hope to complete this work by Oct. 1.

THE POTATO-PENS UP TO DATE.

Just now, August 11, we have notice of two potato-pens in Columbus, Ohio, that were planted to early potatoes, and the vines have matured and the potatoes have been dug. One of them, says the owner, "did not get as many potatoes out of the pen as he put in for seed." The other says, he "reaped half a bushel from it, all from the top. They were all good potatoes, however." We now await with "bated breath" a report from Hendricks, of Kansas City, Mo., who invented the potato-pen forty years ago, but has just recently given it to the world. How many potatoes will he get from the pen on which he is bestowing such extra pains? See page 559, July GLEANINGS.

WORLD-WIDE PROHIBITION.

Since GLEANINGS has got to be a monthly instead of a semimonthly, it is a hard matter for me to note the progress prohibition is making, because the news I give will probably be stale before it appears in our monthly. But here is a brief letter from one of our beekeeping friends in Porto Rico that I think will please you as it pleases me. It was written to my son-in-law, Mr. Boyden:

Mr. A. L. Boyden:—Please inform Mr. A. I. Root that Porto Rico was voted dry by about 35,000 votes yesterday. Some of the propaganda we have been responsible for when traveling over the hills. For four years demon rum will be banished, nor can there be anything imported for four years. There is a lot of kicking because the Jones Act provided prohibition. The liquor interests wanted a referendum, and they got the "steam roller."

J. M. J. SIEBEKT.

Mayaguez, Porto Rico, July 17.

In a letter from Superintendent Crooke, of the Anti-saloon League of Florida, dated Aug. 8, I find the following:

We are in the hottest fight ever waged in Jacksonville. The President yesterday closed the saloons in Pensacola, Key West, St. Augustine, and fourteen saloons in Jacksonville, which were located within half a mile of the armory.

C. W. CROOKE.

Jacksonville, Fla., Aug. 8, 1917.

In regard to Key West, I clip from the Manatee River Journal as follows:

Prohibition went into effect in Key West at 6 o'clock Saturday night in accordance with the proclamation of President Wilson, of July 25. Secret-service men notified all the saloons that they could not open within half a mile of the military reservations. The island of Key West is one and one-half miles wide and four and one-half long. The reservation includes every section of the island.



Free!

A 50-gallon barrel of Scalecide free to any any one who will suggest a *fairer* guarantee than that given below.

SCALECIDE

As proof of our confidence and to strengthen yours, we will make the following proposition to any fruit grower of average honesty and veracity: Divide your orchard in half, no matter how large or small. Spray one-half with "SCALECIDE", and the other with Lime-Sulfur for three years, everything else being equal. If at the end of that time, three disinterested fruit growers say that the part sprayed with "SCALECIDE" is not in every way better than that sprayed with Lime-Sulfur, we will return you the money you paid us for the "SCALECIDE".

Send for new free booklet, "Profits in Fall Spraying".

B. G. Pratt Co., M'fg Chemists
50 Church St. Dept. 6 New York

PATENTS

Practice in Patent Office and Courts
Patent Counsel of The A. I. Root Co.

Chas. J. Williamson, McLachlan Building
WASHINGTON, D. C.

SWARMING CONTROLLED

If interested, address Charles Thompson, Marion, Iowa, for information.

BEE SUPPLIES

Send your name for new catalog.
Dept. T, CLEMONS BEE SUPPLY CO.,
128 Grand Avenue, Kansas City, Mo.

SUBSCRIBERS:

Please always, always, **ALWAYS**, when writing to have the mail address of your "Gleanings" changed, give the former post-office address. Please do. It will save the publishers much time and inconvenience.

THE A. I. ROOT CO., Publishers.

AROUND THE OFFICE

M.A.O.

The only way I can stick in "Gleanings" at all any more anywhere is by saying the very first thing in this September issue that a lot of things I have written ain't so and take it back. So I say it ain't so and take it back. For instance, that the squash bugs in my garden that escaped some one's plan of death-by-fright got as large and noisy as partridges. I take part of that back. I'll skin back the statement about Mel Pritchard's thinking the drones in the greenhouse mating experiment didn't know a virgin queen from an air ship. Mel couldn't a-known that. But I won't take very much more back for nobody, so I won't. I am sufferin' back here in these back pages of "Gleanings" as an apostle and standard-bearer of truth, and I am going to keep on apostling and standard-bearing till the cows come home. I am telling a durned sight more truth than I am of the other kind back here, and if I get kicked out and martyred, it's because the editors can't stand it—so it is. I am going out thru the back cover-page with the banner of truth and progress flying, when I go. But in a good many ways I am like the mighty Muscovite revolution—once started they can't quell me. But, as I said up above, I take it back—just enough, that is.

* * *

A friend of mine down at Ada, O., who is a beginner, made a bull's eye and rang the bell when he shot this into some of the high lords of beekeeping in a letter to me. Here's his shot: "I am just a poor beginner, and most of the time don't know how to proceed with my work with bees, for the department editors of Gleanings advocate this, that, and t'other. Each one says he's right and the other fellow wrong—so, who in samhill can I believe? I think twelve beginners should be picked as a jury, with A. I. Root as judge, and a verdict rendered as to who are the sheep and who are the goats among those department editors." Gosh, but that tickles me! Hit 'em agen! Let's us beginners and me square off against the old bee highcockalorums every time we get a chance (only I wish to except my friend, J. E. Crane, who once said something good about Man-Around-the-Office).

* * *

I guess the Roots did themselves something that they didn't "calullate" on when they took me by the scuff of the neck and kicked me out back here in the advertising columns. They didn't mean me any good, that's sure. But it seems now they have helped themselves as usual by slamming me, for a sure good friend of mine away up in North Yakima, Wash., writes a sympathetic letter taking my side against all the editor crew, and says: "Gleanings must be trying to help their advertisers, for no sooner had I finished reading your pleasant

BANKING BY MAIL
AT 4%SAFETY and
4 PER CENT
Under All Conditions.

People who deposit money in this bank BY MAIL have the satisfaction of knowing that no matter what conditions may arise, every dollar they entrust to us will be absolutely safe.

Deposits may be safely sent in the form of check, draft, express, or postoffice moneyorder, or the currency by registered mail.

We will be glad to have you make use of our facilities with the understanding that you will receive perfect protection and thoroughly efficient service.

Write for detailed information concerning BANKING BY MAIL.

THE SAVINGS
DEPOSIT BANK CO.
MEDINA, OHIO

A. T. SPITZER, Pres.
E. R. ROOT, Vice-Pres.
E. B. SPITZER, Cashier

ASSETS OVER ONE MILLION DOLLARS

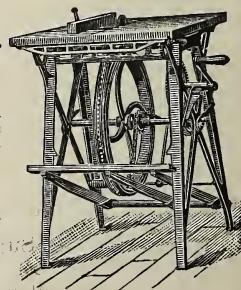
BARNES'
Hand and Foot Power
Machinery

This cut represents our combined circular saw, which is made for beekeepers' use in the construction of their hives, sections, etc.

Machines on Trial

Send for illustrated catalog and prices

W. F. & JOHN BARNES CO
545 Ruby St
ROCKFORD, ILLINOIS



Around the Office—Continued

jest than my eye fell on the Stover Apriaries advertisement; and, feeling rather happy over that one about old Mr. Root 'having his eye on her,' I bought one dozen queens of the Stovers. It is an ill-wind, etc., you know.' I've nothing against the Stover apiaries yet; but if they don't hold out enough from what they pay the Roots for advertising to give me a commission on those 12 queens, I'll list them right alongside the editorial Roots and begin waitin'.

* * *

The hat, of which a picture is printed in the center of this portentous paragraph, was one worn by Editor E. R. Root during the course of a bee misunderstanding in which he animatedly engaged at about 6 p. m. July 2. The little specks to be seen on the crown of this chapeau are not hayseed nor yet ostrich plumes. They are detached and withered bee-stingers hors de combat. There were 127 of these battle banners, by actual



Stinger Trimmed.

count, sticking in that hat-crown when Mr. Root laid down the red-hot gauge of busy battle and hied himself to his quiet home via a doctor's office. The apiary mistake wasn't his. He went in to save the day—and did it gloriously; but, as they say, "he got his." Oh, he did! he got it the durndest. The only comment I have to make at this time is that I recall this same E. R. Root some years ago giving a lecture and demonstration on the gentleness of bees up in the good old Medina Congregational church—and I believed him then. THEN. And wasn't that a holy place to try to put that stingless stuff across? I wot it so. Poor old Uzzah was called hence indefinitely and hasn't reported since for just thoughtlessly touching the Ark of the Covenant in trying to keep it from tipping over. Supposing he had tried to pull off a "stingless" bee demonstration in it—and had got stung ad infinitum while he was propounding the stingless, too! I don't want to make E. R. Root remorseful the rest of his life or his old age unhappy; but I had thought on these things, and don't see why I shouldn't now

Queens of MOORE'S STRAIN of Italians

PRODUCE WORKERS

That fill the super quick
With honey nice and thick.

They have won a world-wide reputation for honey-gathering, hardiness, gentleness, etc. Untested queens, \$1.00; six, \$5.00; 12, \$9.00. Select untested, \$1.25; six, \$6.00; 12, \$11.00. Safe arrival and satisfaction guaranteed. Circular free.

J. P. MOORE,
Route 1, MORGAN, KY.

Queen-breeders

"Best" Hand Lantern

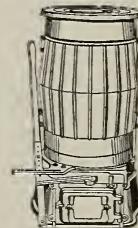


A powerful portable lamp, giving a 300 candle power pure white light. Just what the farmer, dairymen, stockmen, etc., needs. Safe—Reliable—Economical—Absolutely Rain, Storm and Bug proof. Burns either gasoline or kerosene. Light in weight. Agents wanted. Big Profits. Write for Catalog. THE BEST LIGHT CO.

306 E. 5th St., Canton, O.

VICTOR and HOME VICTOR

Multiple System Water Heaters for House Heating



Heats bath and kitchen boiler too. ONE STOVE AND ONE FIRE YEAR ROUND. There is nothing like it. Send for booklet.

S. V. Reeves, Mfr.
Haddonfield, N.J.

BEEKEEPER'S SUPPLIES

HIVES . FRAMES FOUNDATION . ETC.

The Tillson Company, Ltd.
Tillsonburg, Ontario, Canada

LEPAGE'S GLUE

HANDY BOTTLES FOR EMERGENCIES 10¢

Rhode Island Northern-bred Italian

Queens, \$1.00. Circular.
O. E. TULIP, ARLINGTON, RHODE ISLAND

QUEENS Select Italians; bees by the pound; nuclei.
1917 prices on request. Write
J. B. Holopeter . . Rockton, Pennsylvania

Around the Office - Continued

make this surging thought public. He shouldn't do such things in church. If he can and get away with it, then Uzzah wasn't treated square, not by a durned sight he wasn't.

* * *

I don't know whether John C. Finlay, breeder of Italian queen-bees at Kilwinning, Scotland, is any friend of mine or not. Why I am in doubt about it is because he wants me to recommend beer (in a way) to Mr. A. I. Root, after he (Finlay) knows perfectly well what happened to me just for quoting some "language" of a roiled man who hadn't found the crank to the "extracter" these Roots had sent him. I won't take any more chances myself, for I have got house rent to pay. So I am going to let Finlay say it himself, and I don't care much whether the 500 miles of land and 3600 miles of water between him and A. I. Root saves him or not. Here is what Finlay slipped to me, trying to get me to pass it along o. k.'d: "I notice you now wish you 'had'n'adidit' about that fellow and the crank of his extracter. I do not wish Mr. A. I. Root to be 'on you' again, but here is a little tip on uniting which we Scottish beekeepers use—that is, spray the bees to be united with a little beer. It works like magic. The bee is very quiet when intoxicated—unlike human beings. We call this the 'beery method.' Kindly recommend the above to Mr. Root." Say, Finlay, you come over and recommend it yourself. I positively don't, won't, and wouldn't and dasn't. No, nix, not, never and nevermore. Do you, Finlay, understand now?

* * *

My friend, R. A. Alden, of the Seattle "Times," sends me word of how a queen-bee temporarily reduced Uncle Sam's army force out there by one man. It was "this a way:" Avery Smith, a rancher living near Tacoma, Wash., hobbled into the recruiting office of the Eighth Engineer Regiment at Seattle recently all fussed up. When he could get the attention of a lieutenant he said: "I put this here queen-bee in her little wood carrying box, Lieutenant, an' started hoss-back on ol' Baldy across the hills f'r the home ranch. Thru the timber, where it was cool, the swarm follered us peaceably enough; but out on the prairie when the sun hit 'em them bees got unpacified sudden, like a boiler bustin' up. They stang me an' they stang each other an' they stang ol' Baldy—which it cost me \$3 f'r a long-range telephone call to find out the sheriff had stopped the critter five counties up state. Sheriff said they was a quart of bees still festooned on ol' Baldy, enjoyin' the ride. So, if I could lend my boy Henry back from the army f'r a couple of days he could haul me an' the queen-bee to the ranch in his automobile which can't get stang, whilst—" About that time the Lieutenant had heard enough.

QUEENS

Quirin's Improved Superior Italian Bees and Queens. They are Northern Bred and Hardy. . 25 Years a Queen-breeders.

PRICES	Before July 1st			After July 1st		
	1	6	12	1	6	12
Select untested.....	1.00	5.00	9.00	.75	4.00	7.00
Tested.....	1.50	8.00	15.00	1.00	5.00	9.00
Selected tested.....	2.00		18.00	1.50	8.00	15.00
2-comb nuclei.....	2.50	14.00	25.00	2.25	12.00	22.00
3-comb nuclei.....	3.50	20.00	35.00	3.25	18.00	32.00
8-frame colonies.....	6.00	30.00		5.00	25.00	
10-frame colonies.....	7.50	38.00		6.50	32.00	
1-2 lb. pkg. bees.....	1.50	7.00		1.00	5.00	
1-lb. pkg. bees.....	2.00	10.00		1.50	8.00	

BREEDERS.—The cream selected from our entire stock of outyards; nothing better. These breeders, \$5.00 each.

Can furnish bees on Danzenbaker and L. or Hoffman frames.

Above price on bees by pound, nuclei, and colonies does not include queen. You are to select such queen as you wish with the bees, and add the price.

No bees by pound sent out till first of June. Also nuclei and colonies, if wanted before June 1, add 25 per cent to price in table.

Breeders, select tested and tested queens can be sent out as early as weather will permit.

Send for testimonials. Orders booked now.

Reference—any large supply dealer or any bank having Dun's reference book.

H. G. Quirin, Bellevue, Ohio

Queens from Dr. C. C. Miller's Best Breeders

We have made arrangements with Dr. C. C. Miller to keep us supplied with some of his best breeders, and are rearing queens from these superior mothers that we guarantee to be as good as can be reared. These queens are not just individuals that have made a good yield; we all have some colonies that made a good showing, but all do not have a strain that holds the world's record as his does. You are getting at a low price the results of fifty years of careful breeding of one of the most successful beekeepers in the world. Safe arrival and entire satisfaction guaranteed on all goods sold.

One untested Miller queen, \$1.00, \$11.00 per dozen; 75¢ each in lots of 25 or more. Tested, \$2.00. Ex. Se'ct Tested, \$3.50. Breeders, \$5.00 to \$10.00 each.

A two-frame nucleus and untested queen of this strain shipped on the tenth of May, 1916, built up into a ten-frame colony and stored FOUR SUPERS OF COMB HONEY and the owner says he believed they would have filled another super had he known enough to have given it to them.

In buying queens to fight EUROPEAN FOUL BROOD remember how little it affected DR. MILLER with this same strain.

**The Stover Apiaries
Mahew, Miss.**

QUEENS OF QUALITY

Capacity of Yard over 1000 Queens a Month

After 20 years of careful selecting and breeding I now have a strain of bees that cannot be excelled by any. . . . My queens are all bred from IMPORTED STOCK, the very best in the world for honey-gathering and gentleness. They are not given to swarming. What more do you want in bees than the three above qualities?

	1	6	12	1	6	12
Untested	\$.50			Tested	\$ 1.25	\$ 7.00
Select untested..	.75	\$4.25	\$8.00	Select tested..	2.00	11.00

GUARANTEE.—You take no risk in buying my queens, for I guarantee every queen to reach you in first-class condition, to be purely mated, and to give perfect satisfaction. All queens that do not give satisfaction I will replace or return your money. Send for circular.

L. L. Forehand, Ft. Deposit, Alabama

Eastern Beekeepers

This is the time you will need hives, sections, and foundation. Let us mail you our catalog giving prices on everything a beekeeper needs. We furnish full and nucleus colonies, bees by the pound, and queens.

A 3-fr. nucleus colony and Italian queen in a shipping-box, \$5.10; tested Italian queens, \$1.50; untested, \$1.10.

Our location enables us to get goods to you promptly.

I. J. Stringham, 105 Park Pl., N. Y.
Home Apiary: Glen Cove, L. I.

Mott's Northern-bred Italian Queens

are hardy, prolific, gentle, and hustlers, therefore resist well disease.

Untested, 75c each; \$8.00 for 12.

Sel. Tested, \$1.50 each.

Virgins, 50c each; or three for \$1.00.

Bees by pound.

Plans "How to Introduce Queens," and "Increase," 25c. List free.

E. E. MOTT, Glenwood, Mich.

Around the Office—Continued

He dictated right then and there a regimental order ordering Private Henry Smith, in training at American Lake, Wash., to convoy one queen-bee and male escort to the "home ranch." The old man hobbled out of the recruiting office, a smile wreathing his face. Later reports are to the effect that the "automobee" got Dad Smith to the "home ranch" unstang further, and with the queen in good condition.

Chalon Fowls, that veteran beekeeper over at Oberlin, O., seems to be a pretty good sort and the possessor of a funny bone, too, for he sends M.-A.-O. this one: "One day an old darkey called on me, and, instead of asking for extracted honey as he had been doing, he requested comb. I remonstrated, saying: 'Why, Uncle Billy, you won't get nearly as much for your money if you take the comb.' 'Yas,' he replied, 'I know dat, Mister Fowls, an' I laik de abstract myself. But dat boy ob mine, he caint git nuffin else in his fool head. He laikes it in de comb an' he don' laike it in de ABSTRACT.' "

I saw a fellow mortal of mine once stung to about one and one-half his normal size—not because he hadn't been around an apiary a lot, but just because he had never been allowed any practice till the hour of battle dawned on a tremendous robbing occasion. Then he and the bees both got great practice. The "old man," viewing his son's swollen condition after the battle, drawled out: "I s'posed Charlie had caught on better'n that by jest bein' 'round 'em." But Charlie had "caught on" to nothing except about 453 stings in the robbing

QUEENS

Our July, August, and September SPECIAL PRICE on untested leather-colored and Golden queens---a bargain never offered to the American beekeeper before.

Prices on 1 to 10 queens, 60 cts. each
 " 11 to 25 queens, 55 cts. each
 " 26 to 100 queens, 50 cts. each
 " 100 to 1000 queens, 48 cts. each

Safe delivery. If not satisfied, return queens, and get your money back. The Root Company, The American Bee Journal, Dadant & Sons, any mercantile agency, and others will tell you who we are.

The Penn Company . . Penn, Miss.

By Return Mail

Choice Italian Queens

Each . . . \$.75 Six \$4.25
 Twelve . . . 8.00 Twenty-five 15.00

J. B. Holopeter, Rockton, Pa.

Around the Office—Continued

fracas, for he hadn't been given a chance. So it turns out that this paragraph is dedicated to the henpeckers, and the henpecked of my country that should be the land of the free, and the home of the brave, husbands. My text, "Don't do it," is found in the first and one thousandth chapter of life and all the chapters in between. The particular chapter I now refer to was written yesterday right where I am now sitting. A whale of a big, florid-faced woman and a little pollywog of a saller man wrote it. She appeared unexpectedly at my door to refresh herself out of the deep springs of my apicultural information, leading this little bit of a man—or, rather, concealing him behind her ample self. She came like a steer thru the corn, head and tail both up. He came patterning. She was some, too, I want to tell you. About 200 pounds, I would guess. He about 108. Her lower jaw was set and firm like the rock of ages—it had had a lot of exercise. His was small and retreating. It had had mighty little exercise. Her eye was filled with the light of battle—his was like a dead chicken's. She was bull-throated. He had a neck like the stem of a wilted Hubbard squash vine. She had a voice like an echo in Mammoth Cave. He had one like a slight draft of wind around a gas jet. She could look you in the eye and challenge you to battle without a spoken word. He couldn't

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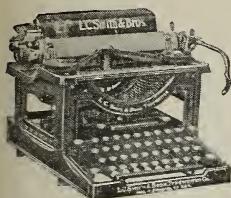
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Around the Office—Continued

look you in the eye and he couldn't battle a June zephyr. She wore the real pantaloons, while he stuffed out very slightly an imitation pair. She wore the boots and she was also in the saddle, you bet. All together, he looked like a lost cause or a dog with porcupine quills in his nose—that's an awful subdued look. But to get to it. The Mrs. opened the ball, of course. She nearly filled the office door when she bellowed out: "Is this the place where they answer bee questions?" I assured her that she was almost at the exact center of the universe for information about bees. Reaching behind her, she yanked out her husband, and dragged him to the front. "Now ask him what you want to know," she commanded of the poor little atrophied remnant of what once had been a man, and he obediently piped up: "We've got two flocks of bees, and they've swarmed. Don't we want a swarm-catcher?" I said no, and told him how to capture the swarms without that expense in so small an apiary. "Ask him some more," she sternly commanded, and gave his sleeve a yank. "Then, say," he efforted again, "perhaps we need a coop and a cooperator?" Did he mean a hive and super or two? I guess so, but don't know. That poor little man! Held in leading strings! Kept under! Not allowed out—not long enough to get the names of things in his little apiary! O women of America, remember my text: "Don't do it"—don't hen-peck 'em. Wear 'em down to an early grave, or end 'em quick with a rolling-pin, but don't keep 'em around after they're really no longer here. They look so—and they don't amount to anything, either.

The editor-in-chief of "Gleanings" is today (Aug. 13) just back from the East, where he has been attending a series of beekeepers' meetings. He doesn't look as if he got back any too soon. He also looks as if he had been drawn thru a knot hole. Looked at another way, he looks as if he had been thru both the battle of Verdun and Messines Ridge. Well, why? I am guessing this is the whyness of it. You see, at the New York State Association of Beekeepers' Societies' meeting on Aug. 3 he got up and told about 13 and 15 cents being paid for some extracted honey and a dim possibility of even 20 cents being paid some day. Great geewhillikins gee! "Old Selser"

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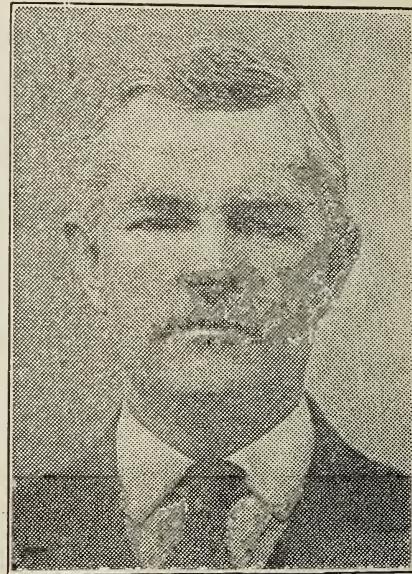
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Around the Office—Continued

(now that's just what I heard three beekeepers all together unanimously and gladly call him) of Philadelphia was trying to buy honey for the A. I. R. Line people right in that vicinity, and it brought a holler out of him. I guess it did. That Selser brand of holler sounded half like the roar of a lion with its tail pinched (hard) and half like a dead-sure earnest scream for help—sort of a drowning man's holler only worser. It reached Medina by telegraph, but a fellow with good hearin', if he was listenin', could have heard it wireless in San Francisco Bay—it was such a loud holler. Honey had dried up just altogether completely and simultaneously at Selser's price in New York state, after Root's talk. Then when E. R. got to New York city, the honey-brokers had got a report of his speech—and they told him too. They told him a-plenty—mostly that he had better go home and dry up, for he had "spilled the beans" for sure. He didn't get a kind look anywhere—not even from the Air Line direction. Nosiree. He was the real orphan boy. He didn't know what he'd get when he got home, either. "Gleanings" gave him a regular hero-home reception—and he was glad to hear a kind word again. What other sort he has had since he got home, I don't know—and he says he ain't carin'. But this is a fair sort of candid explanation of why he looked so when he put his grip down on the railroad station platform at Medina this morning. (P. S.—This will never get into print if one of the editors sees it in advance. The printing-room foreman says he's with me and they shan't. Dear readers, if you never, never more hear from poor M.-A.-O., goodbye. You'll know why. Others must die—why not I?) (Another P. S.—I positively have nothing agin MR. Selser. My bees didn't produce a pound of surplus, so I hain't got any honey to sell, anyway.)



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